

ST APPLICATIONS

The Magazine for Users of Atari ST, STE, Falcon and TT Computers

Issue No. 26, February 1993

THIS MONTH

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Mouse Tricks 2

There are already a lot of mouse utilities available for the ST, but Peter Crush thinks he's found one that puts all the others well in the shade: Mouse Tricks 2, much more than just a simple rodent accelerator.

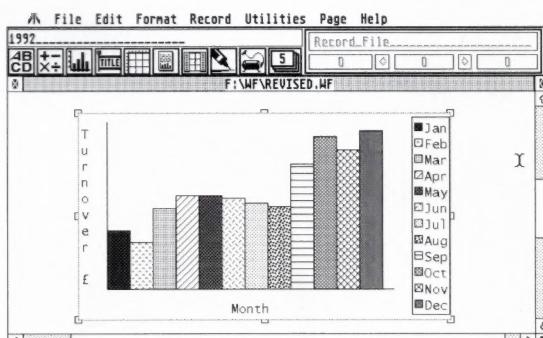
Easy Text Professional



From Roger Pearson and zzSoft comes Easy Text Professional, the third in a line of DTP packages that started with the very basic Easy Text and then progressed on to Easy Text Plus. The Pro version introduces

features that have a lot in common with Timeworks Publisher and is still very competitively priced. Review by Steve Delaney.

Wordflair II



Martin Norfolk has long been a fan of HiSoft's full-page adverts, but is he just as enthusiastic about their latest product, version 1.11 of Goldleaf Publishing's Wordflair? Problems with FSMGDOS notwithstanding, he thinks he may indeed take to it very strongly once the replacement Speedo is available.

Printed in the U.K.

Icons!

With the help of a painting programme such as Public Painter or Degas Elite, Jeremy Hughes' Imagecopy and Fontkit Plus, and finally NeoDesk's Edit Icons option, Paul Kenny sets out to show iconophiles how to create their own customised desktops.



The Compleat Swiss ...

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CREDITS

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Contributions

The articles in *ST Applications* are written by users for users. Everyone reading this magazine will have something to contribute; even if you do not feel able to do a full-length review or article there is the Forum section for short hints, tips and questions. If you are interested in writing for *ST Applications* - regularly or irregularly - please write for a copy of our terms and conditions. We always do our best to reward quality work with appropriate remuneration.

Atari News

Falcon News

Support for Atari's forthcoming Falcon is gearing up with 83 firms already developing software. Work is already progressing on 109 software titles with more being added weekly. Many of those currently in production will be ready by the time the machine hits the mass market. The vast majority of packages under development are on the applications side, with very few games announced. However, these will follow once the machine establishes itself.

Rumours were circulating that the Falcon was available in small numbers through independent retailers before Christmas. To my knowledge this was not the case and I expect (but cannot confirm) that both the 1MB and 4MB versions will be released together in late February or early March in the re-designed Falcon case. I can confirm that reports in certain computer magazines claiming that the Falcon will be released without Multi-TOS are without foundation.

The Falcon made its first television appearance on Yorkshire TV's 'Bad Influence' in the middle of last month. Direct to disk sound recording was demonstrated as well as the graphic capabilities of the

machine. This included a display of ray traced pictures in true colour and FLI animations from the PC running in 256 colour mode. The machine's DSP chip was also discussed on the Show.

Kodak are currently working with Atari to produce a package which will give the Falcon Photo CD capabilities. Kodak already have a Photo CD player which is on sale in Boots but this latest project will give similar capabilities to the Falcon. I have no details of the package at present and it is unclear whether it will consist of software and hardware or simply software and a Falcon with a standard CD drive fitted (which will be available in the Autumn).

Atari Lynx up with Kellogg's!

Atari are to promote the Lynx on the back of Kellogg's Golden Crackles boxes during the first half of the year. A total of 1,001 Lynxes are being offered as prizes in the promotion. In addition, tokens on each box can be collected and exchanged for pin badges. Each of the 16 badges has a picture from a Lynx game. Atari are spending £250,000 on the venture in an attempt to further boost sales of this already successful machine.

Waddingtons Take Responsible Line

A recent report in ST Review erroneously stated that L.A.P.D. were engaged in a copyright dispute with Waddingtons over the distribution of the PD games 'The Risky Construction Set' and 'Napoleon' owing to their similarity to the board games Risk and Campaign respectively. Well, it appears that our friends at EMAP Images very nearly got it right! The 'dispute', if you could call it that, was in respect of the 1985 PD version of Monopoly by David Addison. It seems odd that it has taken Waddingtons seven years to object to its distribution but they must be commended for the responsible way in which they have handled the matter. They contacted L.A.P.D. directly to discuss the matter and the firm offered to withdraw the game immediately and provide a written assurance that they had destroyed all copies and would therefore be unable to supply it. Waddingtons asked for a copy of their catalogue to verify this and have agreed to take the matter no further.

L.A.P.D. asked Waddingtons what they would class as a breach of copyright on Monopoly and the reply was that any game played on a Monopoly board would fit the bill. This would apply regardless of whether or not the game was called Monopoly and whether or not the place names on the board had been changed. L.A.P.D. also informed Waddingtons of the existence of the two games mentioned in ST Review and asked if these too would be looked upon as a breach of copyright on the respective titles. They have offered to withdraw the titles at Waddingtons' request but have received no such request as we went to print. In the light of these developments, it would be advisable for all responsible PD distributors to withdraw any products which use the same board layout as a commercially available board game, especially, but not necessarily, if it has the same name. Other companies may well be less willing to reach an amicable settlement.

Read_Me 1st

Subscription Expired? If you received this copy of *ST Applications* through the post, check the first line of your address label carefully: if it reads **STA26**, then your subscription has expired with this issue; if the information line reads "Complimentary Copy" you have been sent a free evaluation copy of *ST Applications*. Either way, you must take out a new subscription in order to receive further issues.

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Canadian office: Tel: 519 539 0200; Fax: 519 539 9725.

Contact us for details of your nearest *ST Applications* stockist.

Disk Mags

These are bi-monthly compilations of the best PD software to come to our attention in the preceding couple of months - not magazines on disk. The next Disk Mag, DMG.33, will be dispatched a few days after this issue is sent out.

Calligrapher 3 Out Now

Working Title have just announced the release of v3 of Calligrapher Professional and Calligrapher Gold (which is Calligrapher Professional with the Barcodes, Interactive Equations Editor, Flextext, Labels, Automatic timed save, Indexer and Grammar and Style analysis extensions added). Calligrapher Professional requires 1 Meg memory and a double sided or high density drive. Calligrapher Gold requires 1 Meg memory and a hard drive. Documents which are close to using all available memory on Calligrapher Professional will not fit into memory on Calligrapher Gold as the program itself is larger. A total of 31 improvements are listed so if you need a full breakdown, I suggest you contact Working Title for a copy of their news sheet.

Briefly, the main improvements are that GDOS and Line_arc have been incorporated into the program, making it more com-

patible with other GDOS programs; vector fonts can be displayed on screen and font caching is intelligently implemented, both being subject to available memory and hard disk space; the code is moved into TT ram on that machine to run 30% faster; a Postscript driver and UK Thesaurus are included, multi tasking is supported, keyboard shortcuts have been added to the interactive formula editor and a new configuration program is included.

A number of features have been removed in order to tidy Calligrapher. Whether or not you need these will determine if the upgrade is for you. Upgrades to Calligrapher Professional v3 and Calligrapher Gold v3 are available from v2 of any product in the Calligrapher range. For full details contact Working Title, PO Box 4, Eynsham, Witney, Oxon OX8 1UD; Tel: (0865) 883592; Fax: (0865) 883233.

Timeworks User Group

A user group has been set up to cater for the needs of users of Timeworks Publisher. It will cater for the ST and PC versions (both DOS and Windows) of the program. Membership costs £23.50 per annum and includes a quarterly magazine, Timeworks User, as well as discounts on GST products and third party software. The magazine will provide advice on using Timeworks, advice on purchasing printers, free advertising of second hand software and hardware and in fact anything else of value to Timeworks users, subject

to sufficient interest and contributions. Discounts offered to members of the Softline support scheme will also apply to members of the user group. It should be pointed out that, although the user group is recommended by GST and Electric Distribution, it is completely independent of them. The first issue of Timeworks User is due out this month. For more information contact Rob or Pauline Meek on 0708 762861 or write to Timeworks User Group, Harefield Villas, 24 Douglas Road, Hornchurch, Essex RM11 1AR.

Competition not so Competitive!

Following on from aggressive pricing in the run up to Christmas, Commodore have increased the retail price on their Amiga line up. The direct competitor to the 1040 STE is the 2 Meg A600 and it rises to £329 (more with software bundles), compared to the 1040 STE Family Curriculum Pack II at £299. The cost with software bundles varies from £379 to £529. The A600 is the replacement for the successful A500 but with countless tales of woe on software incompatibility.

The A1200 is billed by Commodore as the

Falcon's main rival but lacks the graphic and sonic capabilities of Atari's offering. It rises from £499 to £529, making it more expensive than the Falcon. Once again, the Falcon comes with a software bundle (albeit a small one) and the A1200 lacks this. The rises, like everything else, are being blamed on the state of the pound. In view of this, it is becoming less likely that Atari will be in a position to cut the price of the base model of the Falcon from £499 to £399 as was being predicted towards the end of last year.

The Falcon is about to land

The Falcon is currently on its way to England, the boat containing it due to disgorge its contents in January rather than the previously announced times. The reason for this tardiness would look good in a comedy script, but does not have such a high appeal for Atari: the testing equipment which banished at least two batches of Falcons to the depths of the recycling plant was, itself, faulty. This was discovered when someone tried re-testing one of the "faulty" batches by hand and could find nothing wrong. The equipment has now been fixed, the Falcon has passed its tests and is proceeding towards us in an orderly fashion.

Because of the delay, Commodore have been able to release their new machine before the Falcon. We might have considered this to be bad news, but the official Atari attitude is one of relief. Even the great Amoeba-loving

magazines have expressed their disappointment at the sound quality of the A1200 and have suggested that one reason for it coming in at £399 is that it has the old-style 720 KByte double-sided drive rather than the newer, more expensive 1.44 MByte high density drive. The Falcon excels both ways.

One way in which the A1200 is superior is in its palette range, 16.7 million colours with up to 262,144 on screen at once. Atari say that that's very nice (they were thinking of doing it themselves) but you wouldn't be able to use that sort of palette in moving images such as those in games, so they abandoned it. It looks as if the A1200 will use only 256 colours on screen during games, so maybe it's not got such an advantage.

Atari are looking at the A1200 as the Commodore version of the STE, where there's nothing suffi-

ciently new to make manufacturers construct products to take full advantage of the enhancements. They say that they don't want the Falcon to be used "just to play old ST games". They want a product that advances the frontiers.

We may all be able to make up our own minds about the relative advantages of all three new 32-bit home machines (Falcon, A1200 and Acorn Archimedes) since they are to be set against each other on Gamesmaster. Should be interesting.

The CD format that the Falcon is to be compatible with has not, as yet, been determined. Atari are waiting for an industry-wide standard to be announced next year (with particular hopes for the CD version of video tapes), and will then adopt this as the one to aim for. This will allow the Falcon to use any software made for this medium and, being industry-wide, there will quickly be a lot of software. At present, it will use any CD drive that conforms to the SCUSI standard, but no current software.

There will be an official launch

of the Falcon at Hanover in early March. By that time, the new case will have been developed and the price will drop to £399, making it cheaper than the A1200 which is due to rise in price to £429 in the new year. The Falcon's case hasn't been seen yet. Although feedback and information is taken from England, Germany and others, decisions are actually made in Sunnydale, USA, which is why Atari UK sometimes seem so reticent to talk about their products: they don't always know about them, and try to cover up by saying that they're not at liberty to discuss them. The exact reason why the price will fall just because of a case change is not yet clear. Maybe various chip sets will be integrated to make production cheaper. News is also a little thin on whether this drop in price will apply to the whole range or just the entry level model.

* Atari are currently expecting to be able to send out review and development machines in mid December. With a bit of luck, there'll be a review next issue.

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News In Brief

High colour - no Falcon!

The Crazy Dots graphic card has been available for almost two years and offers resolutions of up to 1664x1200 in monochrome or 16 colours and 1280x800 in 256 colours, depending on the capabilities of your monitor. The new High Colour Module allows up to 32,768 colours on screen simultaneously (i.e. 15 bit graphics). The only restriction is that Crazy Dots can only be used with the Mega ST, Mega STE and TT. It will not run on an ordinary ST or STE. System Solutions claim that "it is very likely that many of the new Falcon applications will run with the Crazy Dots driver". Crazy Dots is compatible with most programs which use 'clean' GEM calls and is recommended by DMC for use with Calamus SI. It is also register compatible with PC graphic cards and it is possible to use MDA, CGA, EGA, VGA and Super VGA emulation under PC emulators. Crazy Dots

costs £449 for the 'basic' version or £529 including the High Colour Module. The High Colour Module can also be purchased separately for £99.95. For further details contact System Solutions, Windsor Business Centre, Vansittart Road, Windsor SL4 1SE; Tel: (0753) 832212; Fax: (0753) 830344.

Europress News

Within days of each other, two managing directors from within the Europress group left the company. Ian Dalglish (Europress Publications) and Brian Raynor (Europress Interactive) had both been with the company for about a year. Europress have strenuously denied rumours that the two were fired and said instead that both came to the end of their contracts and "all parties involved decided not to renew". There are no plans to replace them at present.

Europress Software recently released three more educational titles in the ADI series. ADI Maths, English and French are available now for £25.99 each. The junior range in the series, Counting and Reading for 4-5 year olds and 6-7 year olds will be released on the Amiga and PC this month. ST versions are expected to follow later in the year. Meanwhile Europress notched up 500,000 sales of the Fun School series shortly before Christmas.

Future Entertainment

Future Publishing were so pleased with the 55,561 turnout (despite an estimated 5,000 'gate crashers') at their first Future Entertainment Show that, not only have they announced a followup, but they have also set up a separate exhibitions division to handle future events (pardon the pun!). The events in question will be The Amiga Format Show, The Future Entertainment Show and The Needlecraft Fair. Tony Keefe, former director of Montbuild, and David Cunningham will head the new division.

EMAP Making Money

The EMAP group of companies, which includes EMAP Images (publishers of ST Review), have announced an increase in profits of almost £15 million for the first six months of their trading year. This is despite spending £26 million on new launches and buying up other interests. Their total turnover for the six months from April to October was up by £23 million on the same period in 1991. Although profit rose on all their operations, their consumer magazines were where the biggest increases were seen.

Take care with your refills

Care Electronics are offering a 6 pack refill for bubblejet printers for only £19.99. It is called the

'Care 6 Pack' and will refill six HP51608A cartridges, three high capacity HP51626A cartridges or six Can BC-01 cartridges (which can also be used with Star's SJ48). Contact Care Electronics, 15 Holland Gardens, Garston, Watford, Herts. WD2 6JN; Tel: (0923) 894064; Fax: (0923) 672102.

Peaceville Release

Licenceware

Peaceville Records are set to release a number of licenceware demo disks in the near future. They claim to have the co-operation of the musicians involved and are charging participating PD libraries a 20% royalty on all sales in order to recompense the musicians and programmers for their work. The first demo is called Autopsy and is by Tony Longworth (better known as the programmer of the Phantom Of The Opera Demo). It features samples from their forthcoming album 'Acts Of The Unspeakable' and animated video frame grabs similar to his previous demos. Other demos in production include My Dying Bride by Zone Productions and Kong by Chris Lloyd (one of the ST Format reviewers and author of the Magic Eye Demo). For more information contact Peaceville Records, PO Box 17, Dewsbury, West Yorkshire WF12 8AA; Tel: (0924) 457821; Fax (0924) 455120.

"Improviser" from Creative Sounds

Improviser is a piece of software designed to 'assist' in Midi composition. It takes a four track sequence of bass, drums, harmony and melody and generates multiple lines of improvisation as its output. Its aim is not to replace human improvisation but to assist it. Improviser needs a decent composition to work with in the first place and will generate improvisations based upon the existing harmony and melody tracks. The user can exercise extensive control over the improvisation process if so desired.

The program was written by a jazz saxophonist and includes pre-set and user defin-

able rhythm patterns, 16 million random rhythm patterns, pre-set and user defined melody patterns and 16 million random melodic patterns. You can transpose line up or down 24 semitones, play same note only, generate scales from same chord only, change the feel of the improvised line, change the tempo in real time, change improvised volume in real time, mute any track in real time and change track channel. Improviser features a full drum editor and saves improvised files in Midi file format 1. Improviser is available for £99.50 from Creative Sounds, PO Box 877, Bristol, BS99 5AU; Tel: (0272) 244395.

B.Ware With More Shareware!

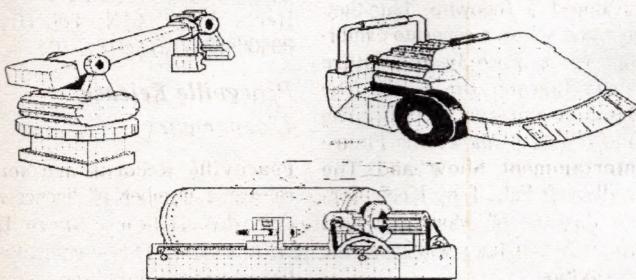
Following the success of Supercard and Supercard 2 as Shareware releases, B.Ware have released a number of their other products including Penguin, Master Doodle and Play Spell. The latest release is Play Maths, which takes the form of a platforms and ladders game based around basic mathematics. Registered users can alter the skill level to suit the child in question. Play Maths is currently amongst the top educational titles at any price, with regard to quality.

Current projects include an STE only version of Penguin and continued development of Supercard, the ultimate goal of

which is to reach version 3 with a new file format which supports the storage of pictures, sound, text, references from one card to another and an automatic index facility. The current version is 2.52 and this is available from the ST Club at £1.45. All this has been made possible through users registering with B.Ware and can only continue if new users of their products continue to do likewise. As well as getting more complete versions of their software, registered users are often sent money off vouchers towards the cost of other B.Ware products.

ROBOKIT

An interface for the Atari ST that allows control of external devices such as Lego and Fischer Technik robot kits.



The Robokit I/O facilities allow control of: motors, servos, solenoids, switches and Lego optical shaft encoders. Robokit has sixteen I/O channels, eight for inputs and eight for output. Of the eight outputs each may be used as a logic or power output. Software supplied includes the PROSE robot operating system.

RRP was £89.99 - now just £22.50

Limited Stock!

The ST Club

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Does not work with the STE or TT, and needs a Mono monitor.

Imagecopy

• Copy images from screen and save them in IMG, Degas or RSC format. Images may be copied by pressing Alternate-Help, allowing you to capture images when the Accessory menu is not available.

• Flexible rubber-banding system which allows images to be selected with a fine degree of accuracy.

• Copies images from both standard and large screens (including virtual large screens such as MonSTER) in any of the normal ST/TT resolutions except TT low resolution.

• Convert images to different formats. Imagecopy reads images in IMG, Degas, NEOchrome, Art Director, and Tiny format, and writes images in IMG or Degas format.

• View images on a monochrome or colour monitor (colour images are dithered on monochrome screens). Up to four images may be displayed simultaneously.

Imagecopy is supplied as a desk accessory and as a stand-alone program. A fully illustrated manual is included.

Coming soon:
Imagecopy Colour

The ST Club

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Nottingham
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Print screen	D

• Print images and screen dumps in a variety of resolutions on a range of different printers, including: 9-pin or 24-pin Epson-compatible dot-matrix printers, Bubblejet printers, and Deskjet and Laserjet printers. Print speed is much faster than normal GDOS output.



Atari Interface Magazine

We are now the UK distributors for Unicorns Atari Interface magazine. This is now one of the two major magazines for ST users in the USA and Canada. As well as plenty of reviews and articles, Atari Interface carries a wide range of advertisements for ST software that is published only in the USA. The Fall issue with cover disk - as detailed below - is available now, future issues will be available as they are published. Price for magazine plus disk of the month: £3.95

Features

Right On Target - Dave Plotkin looks at Dave Small's past and present efforts in the Atari market.

Brace Atarifest Report - The "Lost Boys" of MGAUG show us just how dangerous (and humorous) a trip to an Atari show can be!

Atari Kid's Users' Group - an innovative way in which the PACS users group is serving their members.

TT Lust! - Yves Pelletier shares his views on the TT.

Atari Stockholders' Meeting - John Pilge delivers his synopsis of the shareholder meeting.

The State of Atari - discussion of Atari's latest financial figures, restructuring and the Forbes article.

Atari, Science Fiction, and Cable TV - interview with Mike Kelley of SFAN reveals what this cable TV channel offers and how Atari fits into the picture.

MIDI in the Midst - update on MIDI-related items seen at the Chicago Atarifest.

ST Connection

Warp 9 - the latest software accelerator and configuration ACC from the CodeHeads.

TOS Extension Card - the Mega ST Bus Bridge version of the TEC board from CodeHead Technologies.

Cooling Fan - how to add a cooling fan inside the STE.

STStraight FAX - the latest send and receive FAX software from Joppa.

Home Accounts 2 - new version of an excellent home accounting package from Digita.

8-Bit and Port Connections

Why You Should Keep Your 8-Bit Atari.

PABQWK - shareware online mail reader.

1020 Printer - how to fix problems with this printer/plotter.

Goofy Guru - a use for DOS 3!

Keeping it Organized with the Portfolio - a discussion of To Do lists.

AIM Cover Disk

24 BITS - picture viewer that displays 29,791 colors on an STE or 3,375 colors on an STF with no hardware modification! Supports RAW (CrackArt), RAM or IBM 24-bit Targa file formats.

Cops 'n' Robbers - 2-player low rez arcade game in which one player (in the police car) tries to catch the other (in the getaway car) to prove that crime doesn't pay.

Icon Juggler 1.2 allows you to create your own customized DESKICON.RSC files for TOS 2.06 and above. Reads NeoDesk and DC Desktop icon files.

PAULA 2.0D - plays all those great .MOD sound files from the Amiga. Gives you great control over the sound.

PGS2.2 REF - PageStream 2.2 document updating the Quick Reference Card from Soft-Logik to reflect the changes in version 2.2.

ROOTSDEM.APP - A demo version of Family Roots, an excellent genealogy program from the UK. Runs in all ST/TT resolutions.

SEBRA - Monochrome emulator with many features including the ability to switch between screens. Works with everything including PageStream, Calamus, Retouche Pro, etc.

ST TAR - de/compression utilities to create or uncompress files in the UNIX .TAR format.

TODAY - Today in History for Michtron BBS 3.0. Contains source file and data files for each month.

ZEST KENO - lets you play and analyze hundreds of Keno games in a very short time. Test your favorite numbers and try out custom number combinations. ST monochrome only.

Magazine plus disk: £3.95

The ST Club

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Easy Text Professional

Reviewed by Steve Delaney

Easy Text Professional is the third Desktop Publishing package to come from Roger Pearson and zzSoft. This time it's a joint effort between Roger and HAL Computing's Sean Hodgson. The original Easy Text made a major impact owing to its price and brought basic Desktop Publishing within everyone's reach. It was certainly basic to say the least, but it was possible to create a page of graphics and text for the purpose of single-page flyers.

The follow-up was Easy Text Plus, a more substantial product but still in the budget range, both in features and price. I reviewed both products in another publication and felt that at the price, to call them value for money would have been an understatement. I also felt that they represented a very capable attempt to bring Desktop Publishing within the reach of the hobbyist.

It's a couple of years on from there and the long-awaited follow-up "Easy Text Professional" has arrived. It was released more than six months later than the 'official' release date, but this is something for which zzSoft must be commended. Too often it's simply a case of software publishers rushing out products to meet deadlines and free up resources for other projects. This inevitably leads to 'flaky' programs being released which are full of bugs and often virtually unusable. ZzSoft have taken their time and it shows.

Installation

Easy Text Professional (EZT Pro from here on) is a GDOS-based package, the type of program which is usually a nightmare to install. Thankfully, an easy to use installation program has been provided. EZT Pro comes on three double-sided disks and must be installed onto four double-sided disks or a hard drive partition with at least 1.5MB of space. Although there is no support for the almost extinct single-sided drive, the program may be installed and run from an external double-sided floppy rather than the internal drive, if need be. A utility which allows you to boot from Drive B has been included on one of the disks to facilitate this.

The installation menu allows you to choose your monitor, printer and disk drive configuration (one floppy, two floppies or a hard drive). Once you've made your

selection, click onto the Install button and you will be prompted for the appropriate disks at the appropriate times. It's as simple as that: there's absolutely no way you can get the installation wrong!

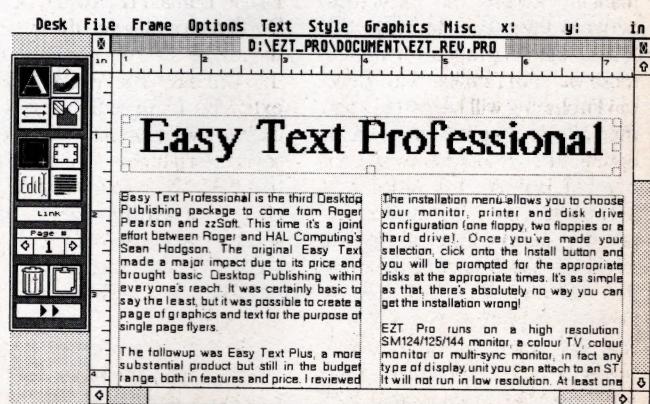
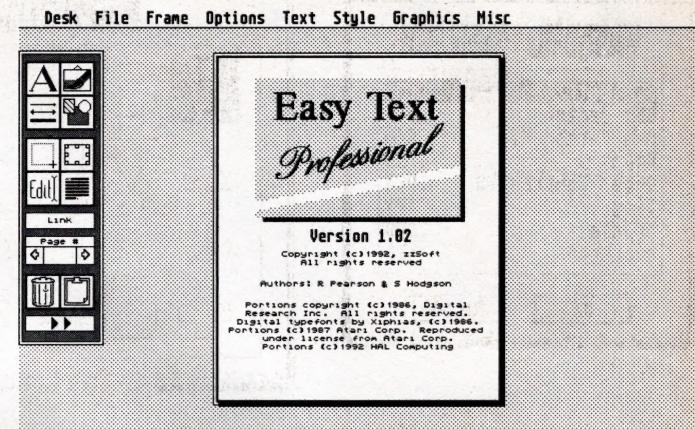
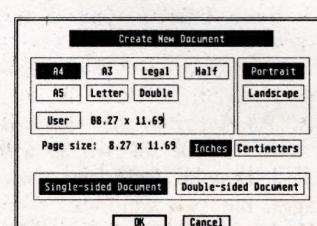
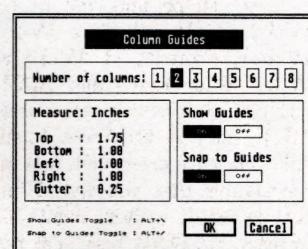
EZT Pro runs on a high resolution SM124/125/144 monitor, a colour TV, colour monitor or multi-sync monitor, in fact any type of display unit you can attach to an ST. It will not run in low resolution. At least one Megabyte of memory is required, but the more the better. More memory allows you to create documents with more pages and use more fonts in your documents. A 4MB machine is required if you are using an Atari SLM804/605 laser printer. The following printers and their clones are supported: Epson FX, Epson LQ, NEC P6, HP DeskJet, Canon BJ, SLM804 and HP LaserJet. In other words, about 99% of printers on the market are catered for. A selection of fonts to match the different screen and printer resolutions are provided with the package and more can be ordered at low cost from zzSoft.

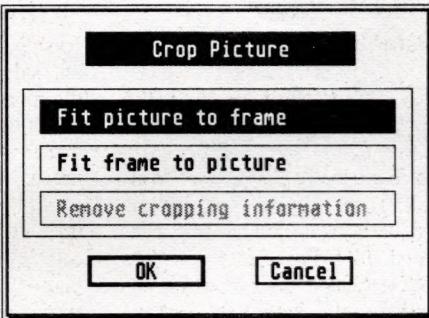
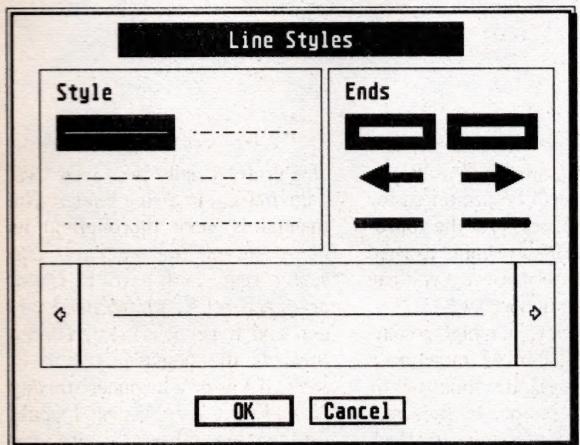
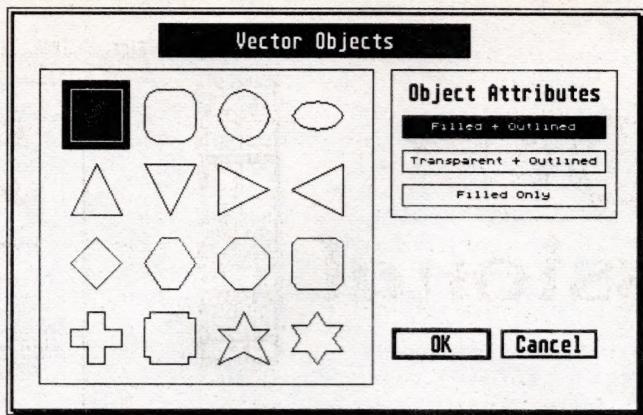
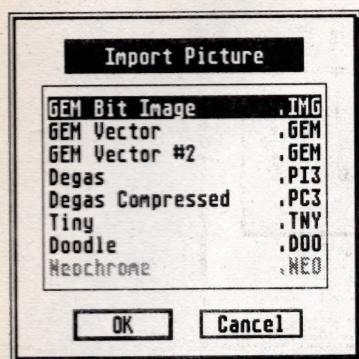
Manual

Documentation comes in the form

of a professionally produced 134-page manual in a ring binder. The manual is very thorough in its coverage of the package and really easy to follow. It is not crammed full of unexplained jargon and is perhaps slanted more towards the beginner's point of view. If I were a beginner starting out in Desktop Publishing, I would find this manual very easy to get on with. Experienced users may find that it states the obvious more than is really necessary for a package of this calibre but I would disagree with that. Nothing is 'obvious' to a new user and the author of any instruction manual must remember this.

The chapters follow on logically from each other and cover every aspect of using the package. The final chapter takes you through an on-screen tutorial using files supplied on disk. It is simple to follow and invaluable to the new user. My only criticism here is that this chapter should have been longer as it takes less than half an hour to work through. It is followed by 6 appendices covering such subjects as keyboard short cuts (there's one for almost every function in EZT Pro),





customising EZT Pro (really intended for the experienced ST user), GDOS, fonts and the ASSIGN.SYS file (essential reading if you intend adding more fonts, but not for the faint hearted), use of the Font Width program (more or less self explanatory), technical help and printer driver information. The manual concludes with a glossary of terms and a full index.

In Use

File support is extensive with regard to importing of both graphics and text. Graphics can be imported in PI3, PC3, TNY, IMG or GEM formats. These are the most commonly used vector and bit mapped graphic formats. The manual explains the differences between these two distinctly different types of graphic format and those who are familiar with Desktop Publishing will be glad to know that all bit mapped files can be optimised in resolution to suit the selected printer. The amount of user control over this is most impressive and, if used properly, will avoid the appearance of the dreaded 'tartans'. If you're new to Desktop Publishing you will soon find out what 'tartans' are; if you're a more experienced user, you'll be glad to know that EZT

Pro is one of the best programs I know for overcoming the problem. Cropping is intelligently implemented and you can even recover the cropped portion if need be. This is the only program I know of which can do this.

It should be noted that EZT Pro will not display or print colour pictures, even when running in colour. They must first be converted to monochrome. A module designed with this sole purpose in mind is available separately from zzSoft and can be used from within the program to allow graphics to be converted as they are loaded, or it can be run as a stand-alone program. There are many mono converter programs in the Public Domain (Picswitch 0.7 and Degas Convert being the best) but they offer little or no control over the process. The colour picture extension from zzSoft gives the user a choice of six dither types, several brightness levels and control over the colour balance. The effects caused by changing these settings are performed on the picture in real time, allowing you to make any fine adjustments necessary.

As well as supporting a plethora of graphic file types, EZT Pro also has a number of pre-defined

vector graphics and line styles incorporated into the program. This allows you to draw such objects as filled or unfilled rectangles, circles, triangles, hexagons, octagons, etc. As these are vector graphics, they can be scaled to any size without any fear of distortion on printout. Lines can be solid or broken, be of varying thicknesses with square, arrowed or rounded ends. The amount of possible combinations on line types and styles is staggering!

Text can be imported in 1st Word/1st Word Plus, Word Writer, Protext, ST Word/K Word, Redacteur3 and ASCII formats. In anything other than ASCII, all text attributes (bold, italic, etc.) are preserved. It is inconceivable that you would import in ASCII with so many file formats supported here. I'm not aware of any other Desktop Publishing package which can import as many different types of text files.

Almost any size of page may be created with EZT Pro. The usual A3, A4, A5, Letter and Legal standards may be selected as with most Desktop Publishing packages, but two additional sizes, Double and Half, are also included. If that's not enough, you can set up

a page to your own specifications to be between 2" x 2" and 35" x 35". Do bear in mind that the average printer takes 8½" wide paper and wide carriage printers take 15", so it's a bit silly designing a page wider than this! All measurements within EZT Pro can be made in either inches or centimetres. You can work with single-sided or double-sided documents (with margin settings reversed).

Unlike its predecessors, EZT Pro can handle multiple pages up to a maximum of 99 per document, although things start to slow down when using very large documents. For this reason, zzSoft suggest that you split large documents such as books into smaller ones, e.g. saving chapters as separate files. All documents start their life as a single page and you simply add pages if and when required. All the usual multiple page commands such as add page(s), delete page(s), move page(s), go to page number and copy layout from one (or more) page to another are present and are implemented in such an easy to follow way that you simply can't go wrong. My only complaint here is that you cannot merge documents, which would have allowed much greater flexibility.

EZT Pro does not allow pages to be worked on at selected sizes. Apart from not using outline fonts and not being able to make text flow around irregular graphics, this is the only major feature lacking in this package but present in Calamus and PageStream! You do have a page preview mode which shows a full page or double page spread on screen. However, all your work must be carried out at actual size. This is a disadvantage to me as I prefer to line up frames at between 200% and 500%, but then again Calamus (my usual DTP program) doesn't always align them perfectly, so it's swings and roundabouts here.

Headers and footers are well implemented in EZT Pro with the option of using different headers and footers for left and right facing pages. You can specify such things as alignment of text, distance from the top and bottom of the page, font used, text attributes applied to the font and whether or not the page number (in Arabic or Roman numerals) will be printed.

Frames

As with any other Desktop Publishing program, the whole program revolves around the use of frames. These may be text frames, graphic frames, object frames or

group frames. All frames are manipulated in the same way as each other but they are distinctly different in the sense that you can only put text into a text frame, graphics into an art frame and so on. This is little more than common sense. When you select a frame, the relevant icon relating to that frame type will be highlighted.

Extensive control is possible over column guides. Simply set the number of columns required, along with the top, bottom, left and right margins and the gutter (space between columns) and the selected amount of equally-sized column guides will be placed at the correct positions on your page. Column guides are merely designed as guidelines for you to draw your frames on, so that everything lines up evenly on the page. They may be ignored if you want to use a different layout for a particular page, or they may be 'snapped to', for greater accuracy.

Frame manipulation is pretty extensive. The ability to send a frame to the back or front allows different types of frames to be placed on top of each other to create effects such as inverse headings, text within vector or bit mapped objects and outlined graphic frames. The most powerful type of frame is the group frame, which allows different types of frames to be grouped together as one. This allows them to be moved or resized as a single unit on the page, especially helpful in the case of forms where several frames are overlaid and lined up precisely. Grouping these prevents the hassles of misalignment if you decide to move the grid elsewhere on the page. Almost every operation which can be performed on an ordinary frame may also be

carried out on a group frame. These may of course be ungrouped at any time if so desired.

Although text can be typed directly into a text frame, this is painfully slow and a tedious job to say the least. This is not a criticism of EZT Pro but a problem common to all Desktop Publishing packages. These packages are designed for page layout, not word processing. It is therefore advisable to prepare your text in your favourite word processor and import it into EZT Pro. Once imported, you can easily alter the font to be used, text height and text attributes from within the program. Simply create a block by dragging the mouse over the text you wish to change (in the usual manner as employed by 1st Word Plus and others) and select the appropriate font, attribute, etc., to change.

Tagging

A similar but more extensive re-styling option is paragraph tagging. Each paragraph imported or created within EZT Pro has a paragraph tag attached to it. This is a very powerful feature which allows extensive control over fonts, point sizes, text attributes, alignment, typography, tabs and spacing. Selecting each category allows the user to set several associated functions. Fourteen tags are available for use, four of which have already been set up with common layouts for you. Sixteen pages of the manual are devoted to tagging, so it's not something that you'll instantly grasp, but it is well implemented, clearly documented and a joy to use once you get the hang of it. Tagging allows for quick and easy re-styling of text and is definitely a welcome inclusion in this package.

Clipboards

EZT Pro has four text clipboards. Text can be copied or moved from frames to the clipboard. As you would expect, moving deletes the original in the frame and copying leaves it intact. Any of the four clipboards may be highlighted, and the text stored in it can be pasted elsewhere on the page or indeed on any other page within the document. Once again, text being pasted into a document may be copied or moved. Unless you are working with a block of text containing a paragraph tag (i.e. the first line of a paragraph), all information originally attached to that block, including font, point size and attributes, are lost. When the block is pasted elsewhere in your document, it assumes the characteristics of the tagged paragraph into which it is pasted. I was at first disappointed to see that only text may be sent to the clipboard. However, other types of frames may be duplicated easily on screen, thus eliminating the need for such a facility.

Printing

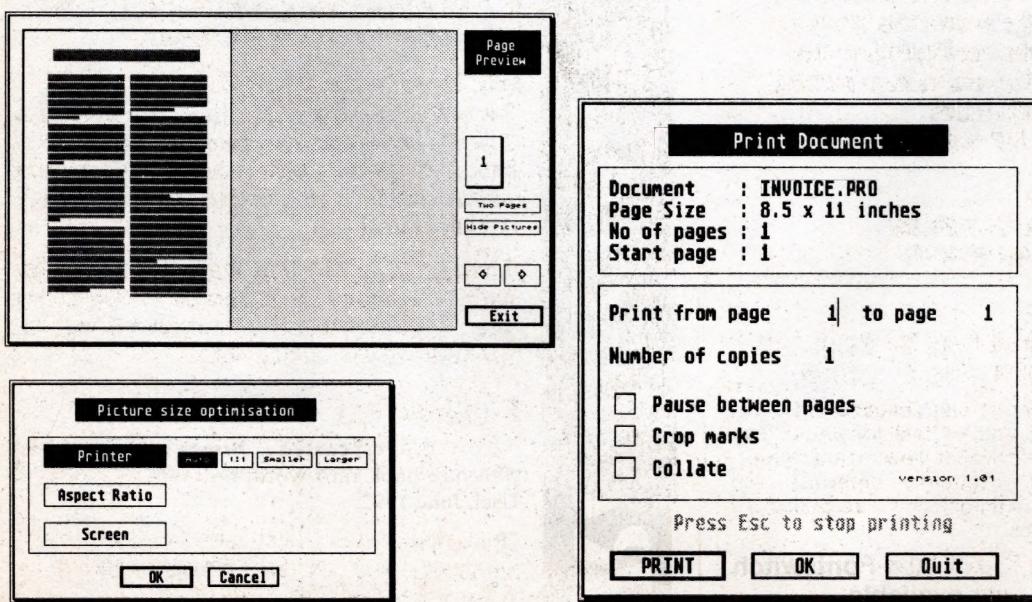
As they say, 'The proof of the pudding is in the eating'. In the case of Easy Text Professional, it's the printout that we are interested in. Does it live up to its professional tag? All printing is done by a separate printing program, somewhat of a mixed blessing. The bad news is that your document must be saved before you can print it. On the other hand, if your machine is tight for memory once you've completed your document, you can exit the main program and run the printing program (which takes up much less memory) from the Desktop. The print program itself

gives extensive control over the process, allowing you to specify which page to start printing from, how many pages to print and how many copies of each page are required. The actual printout is as good as any other program using bit mapped fonts. The only limitation is the quality of the fonts you decide to use, and those supplied with the package are of a high standard.

Like any other serious package, Easy Text Professional is cumbersome to use when working on floppies and is really designed for use with a hard drive. Having said that, if you've never owned a hard drive, you will find the disk swapping with EZT Pro to be no more of a bother than with any other serious package. The use of two floppy drives greatly eases the disk swapping aspect. Another disadvantage of using floppies is that you can quickly run out of space as Desktop Publishing files (from any DTP package) tend to be on the large side. My tip here is that you should format your disks to 82 tracks, 10 sectors per track, skewed on, with DC Format, as this increases disk capacity and speeds up loading, but then I'm sure you already knew that, didn't you?

Conclusion

For a product with so many features as Easy Text Professional you would expect to get very little (if any) change from £100, wouldn't you? Well, you could not be further off the mark. EZT Pro costs just £39.95! A package which started its life as a budget Desktop Publishing package has now evolved into something which retains the budget tag in price alone. It is simply the best of the GDOS-based Desktop Publishing packages and in certain respects gives such heavyweights as PageStream and Calamus a run for their money. Easy Text Professional truly lives up to its name as it's both easy to use and professional.



Product:.....Easy Text Professional
Supplier:.....zzSoft
25 Honeyhole
Blackburn
Lancashire
BB2 3BQ
Tel:.....0254 672965
Price:.....£39.95

Timeworks Desktop Publisher

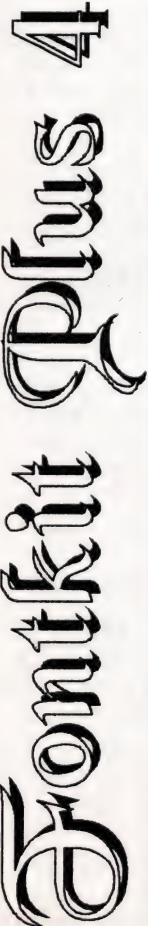
User Guide

260+ pages for £9.95
from the ST Club

At last: a users' manual written from a user's perspective. The author, David Smith, a dedicated user of this versatile package, has learned through experience, and trial and error, how to produce remarkably professional results. This book aims to pass this knowledge on by introducing the basics in such a way that each new feature builds on what has gone before, to form a kind of "learning curve".

The book is full of innovative ideas to produce newsletters, C.V.'s, posters, reports, theses or indeed a professional book (as the guide itself demonstrates). Each feature is explained in easy-to-follow, step-by-step instructions that every novice will appreciate.

Topics covered include: the installation process, setting up a document, importing text and graphics files, special effects, and an extensive section on installing and designing fonts - to make your work really stand out from the crowd. There are numerous worked and visual examples throughout the text.



Fontkit Plus 4 New features:

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Prices:

Fontkit Plus 4 - £24.95
Fontswitch 4 - £14.95

Upgrades:

M: from Fontkit Plus 3 - £8.95
N: from Fontkit Plus 2 - £10.95

Please specify the upgrade code (M, or N) when ordering and return all of your master disks; upgrades include new manual pages. Upgrades from Trimfont, Fontswitch, and earlier versions of Fontkit will be available - phone for prices.

NB Fontkit Plus 3 and Fontswitch 3 are no longer available.

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£29.95

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Continued on next page

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- Includes a 52-page manual packed with tutorials on how to master the macro command, design textual and graphic effects (such as rotating objects in a circle, place text on a path, etc), layout tutorials and much more.
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Redacteur News

Redacteur 3 - £99

New lower price - see full specification on the back cover of our catalogue.

Redacteur Lite - £69

Redacteur Lite is identical to the full Redacteur 3 package, except that it is supplied without the following modules: Sigma Equation Editor (£10), AZtheque Database (£10), Font Editor (£5), Dictionary Editor (£5), French Dictionary (£5). You may buy any of these modules along with Redacteur Lite, or later on. Prices shown in brackets.

NEW - Redacteur Junior - £39

The main wordprocessor from the Redacteur 3 package - amazing value. Limited to printing using printers built in fonts - no graphics mode printing and without the modules detailed above.

Spelling checker and mail merge for Redacteur Junior - £8. Upgrade to Redacteur Lite - £40. Redacteur Lite modules may be used with Redacteur Junior.

Press Reports

"Quick and responsive ... brings excitement and pleasure back into wordprocessing." Atari ST User, June 1992.

"Redacteur 3 is excellent ... the best bits of other wordprocessors combined into one." 90% and a Gold Award. ST Format May 1992.

Postscript

Getting to grips with desktop publishing can be daunting enough without having to cope with the multitude of different standards and formats employed by rival systems. In this two-part article, Michael Baxter hopes to shed some light on the most important system of them all...

For newcomers to DTP, the multitude of font formats and page description languages can be intimidating. To experienced users and professionals they can only be described as a pain. Nowhere is this more apparent than on the Atari platform, where every new word processor and desktop publisher brings with it its own proprietary font format, and quite often a complete new page description language. Just take a minute to list the document processors and page layout programs available for the Atari, then try and list the typeface system they use. The chances are that your list of software packages will more or less balance with your list of font formats.

Cynics will argue that this ridiculous situation stems from the complete ineptness of Atari's original GDOS, forcing third-party developers to devise

their own systems to overcome its tiresome limitations. If GDOS had been any good in the first place, then we might not be in this situation today, but that's another argument altogether. Instead, the end user is left to grapple with Calamus, PostScript, AGFA, PageStream, Calligrapher, Ultrascript, and GDOS font formats all vying for space on beleaguered hard disks, with FSM-GDOS (still) waiting in the wings. Users of several different packages often end up with duplicates of a single typeface, all sporting slightly differing formats, gobbling up disk space in order to support specific applications.

Not only is this annoying, it is also needlessly expensive. The fact that no font editor is yet capable of converting Calligrapher or AGFA typefaces to absolutely anything else has been a personal source of annoyance for sometime,

requiring the purchase of duplicate faces often at considerable cost.

Grass is greener...

The situation is less confused in the Apple and IBM arena, or at least as far as font formats are concerned, where PostScript reigns supreme. Adobe Systems were the pioneers of digital type, and now provide the core of imaging technology on desktop and commercial publishing systems. Here, Adobe Type Manager 2 rules the waves, allowing PostScript fonts to be used universally within any application designed to handle scalable fonts. This stranglehold looks set to continue with the introduction of revolutionary "Master Type Technology", which, in simple terms, provides a whole family of weights, widths, styles and sizes within a single outline file. This removes the need for separate files describing book, italic, bold and bold italic versions of the same face, whilst building in unparalleled flexibility at the same time. In the light of this, it's hardly surprising that other formats have all but vanished from the PC and Apple scene - despite overwhelmingly generous upgrade offers, even Apple are having a struggle trying to establish their own True Type format, despite it having some technical advantages over standard PostScript.

So where does this leave the Atari DTP market? At the

TYPE 1 vs TYPE 3



You may have heard references to PostScript Type 1 and Type 3 fonts. So what is the difference? Which can be used on an ST? Both formats use the same language operators to describe the characters in a font, but Type 1 fonts have two distinct advantages over their Type 3 counterparts. Firstly, they are encrypted and compressed to minimize storage requirements and increase rendering speed. Secondly, and more importantly, Type 1 fonts are "hinted" to PostScript printers, a concept which is explained on the following page. Type 3 fonts are less common these days, but are still favoured to create customised graphics and logos which will not be printed at small point sizes. All

PostScript friendly Atari software supports the Type 1 format, and the current release of PageStream can use both formats, although Type 3 fonts can only be printed on a dedicated PostScript printer, and ironically, Type 1 hinting is not yet implemented by PageStream 2.

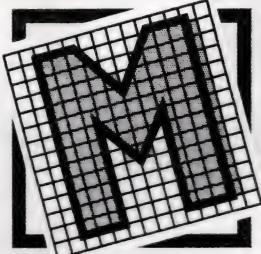
moment its quite difficult to say. PostScript is only just finding its way onto Atari systems via products such as PageStream 2, CompoScript and Didot Professional, but universal acceptance by all Atari software is still a long way off, with no mention of Adobe Type Manager being released.

In contrast, good ol' Calamus led the way under the Fuji banner, being the first powerful Atari DTP engine to offer true WYSIWYG via fully scalable outline fonts. Its release heralded a new era in Atari page creation, but many professionals shunned the product because of its total lack of support for PostScript. In those days, that effectively barred the route to high quality imagesetter resolutions unless you could find a bureau who could process Calamus files, and they were almost non-existent.

Things are a little different today. With the release of Calamus SL and the availability of TT and Falcon hardware, Calamus is rapidly establishing itself as an alternative standard to high-end PostScript systems, being faster, cheaper, and, crucially, more accurate - especially where colour separations are concerned. Nowhere is this more apparent than in Germany, where such systems are taking business away from established Apple and IBM strongholds: even in Britain, sales are reported to be good - at the time of writing, a complete colour solution working at imagesetter resolutions under Calamus control can be put together for around £42,000, whereas comparable PC systems would tap your bank balance for at least £15,000 more.

Nevertheless, Calamus support in this country is still in its infancy, and you will probably have a lot of difficulty locating a bureau able to handle Calamus files. And for the vast majority

A S U B T L E H I N T . . .



Hints are special data structures and algorithms present in a Type 1 font which describe the essential typographic features of the font. "Hints" were developed by Adobe in 1984 as a means to preserve the readability of characters when printed on relatively low resolution printers. For example, when normal fonts are printed at the resolution indicated by the grid to the left, the character "M" will appear with uneven stem widths (left hand 3 pixels, right hand 4 pixels), because where its paths fall equally between two pixels, they are both set. Hints intelligently preserve the stem weights, serifs, curves, etc., as far as possible given the resolution of the printer in use.

of people, a local bureau with such facilities will just simply not exist. Compare that with the situation for PostScript users - just about every major town and city in the country has a Photo-Typesetting bureau, and any worth their salt will accept PostScript files with glee.

So what is PostScript?

The whole concept of PostScript is often a much misunderstood affair. Some see it as a simple printer control code standard, akin to Epson, ProPrinter and PCL-5, to name but a few. Others see PostScript solely as a font format, in the same vein as AGFA CompuGraphic or GDOS. In actual fact, PostScript is a fully-fledged, specialised programming language designed solely with page creation in mind. Being a heavily stack-oriented language, at first glance PostScript looks like a hybrid of the Forth and C languages, and indeed it is possible to write PostScript programs using an ordinary editor and send them directly to a PostScript printer for interpretation - but you'd have to be a sadist to try it. PostScript in its present incarnation is the result of many years of development by Adobe Systems Inc, a company formed by John Warnock and Dr. Charles Geschke in 1982 with the intention of developing and marketing a complete publishing workstation. Working in close co-operation

with Apple Computer, Adobe had a working system available by 1985, coinciding with the birth of the ST. When PageMaker and Word were subsequently released, the whole project snowballed, and the rest, as they say, is history.

Unlike some other formats, a PostScript font does not contain any bitmap representations of the characters in the font. Instead, a PostScript font file is actually a set of PostScript language sub-routines which tell the interpreter how to draw a specific character using

PostScript is actually a fully-fledged, specialised programming language designed solely with page creation in mind...

connected lines and Bézier curves. It is the job of the typesetting software to specify where on the page these images should be drawn, together with any other artwork. This is all linked together as a PostScript "program", and sent to a suitable printer for hard copy output.

A PostScript printer is actually a dedicated computer with its own CPU, memory and ROM (which contains the PostScript interpreter), with a printing engine bolted on. This accounts for the often huge price differential between 300dpi laser

printers and PostScript laser printers of the same resolution. It is also responsible for PostScript's reputation for being a bit of a sloth where output speeds are concerned - PostScript printers that are affordable by mere mortals usually employ low-clock speed processors and as little RAM as possible to keep costs down. And as with other printing systems, there are pros and cons to be considered: on the downside, the printing speed is governed by the processing hardware inside your printer - no matter how fast or powerful the host computer, it has no effect on printing speeds once the PostScript code has been sent. On the plus side, this releases the host computer for other tasks, allowing the printer to get on with its own job. This quite neatly explains the speed advantage Calamus has over most PostScript systems when run on a fast Atari - a Calamus document is rasterised by the host computer at whatever speed the main CPU and assisting hardware runs at, be it 8, 16, 20, 25 or 32MHz, and then sends the resulting image to the printer as fast as the device can accept it. And that, in a greatly simplified form, sums up the concept of PostScript in a nutshell.

Atari users have quite a difficult decision to make when putting together a desktop publishing system, especially one which will be used in a semi-

professional or commercial environment. Businesses that make heavy demands on a DTP resource (and who have tremendous faith in Atari's future) would probably benefit financially by purchasing an in-house system, in which case a Calamus SL based imagesetting workstation would be an advised choice. The extra speed and saving on bureau bills would probably make the system pay for itself within a relatively short space of time.

On the other side of the coin, what about the many small businesses and home users whose budgets simply don't stretch to such lavish systems? For those who occasionally need output of the highest quality, and to whom a locally based imagesetting facility is important, there is a very strong

argument for taking the PostScript path. In the next part of this article, I want to examine the facilities available for Atari owners adopting the PostScript system, and, I hope to help you avoid the many traps and pitfalls that may be waiting for you, based on my own experiences. Incidentally, this article was set using PageStream 2.2, with the help of a few PostScript fonts, from both professional and public domain sources.

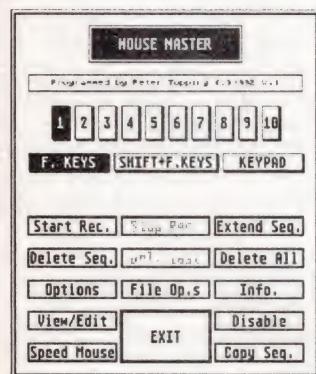
I will take this one step further next month by having the second part of this article set at 1270dpi using the facilities of a local PostScript-based Apple bureau - an acid test of Atari's PostScript ability if ever there was one!

A SAMPLE . . .

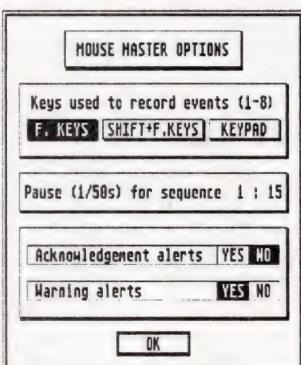
This is the core of a simple PostScript program, once it has been stripped of its own pre-defined library (and often unnecessary) routines. This example prints the word "Atari" using 108pt Bold Palatino in the centre of an A4 page. Simple, eh?

% Begin Page	10000 SHADE
% Begin Tile	(Zapf-Calligraphic801- BoldSWA) 10800
0	10800 0 setfp
0 0 0 0 0 0 0 0 0 100	(A) 8402 17892
100 0 0 612 792 8 0	34410p
596 792 -1 -1 65535	(t) 3596 24134 34410p
65535 1 begintile	(a) 5400 r
0 0 29409 37733	(r) 4201 r
setscl	(i) 3596 r
NW	endtile
17892 43133 MT	showpage
40927 43133 LT	% End Tile
40927 32333 LT	% End Page
17892 32333 LT	
CP	

Mouse Master



Mouse Master allows mouse operations and commands to be recorded in the computer's memory and replayed at the touch of a key just as if you were moving the mouse. This overcomes the need to break your train of thought by stopping what you're doing and laboriously making the mouse commands which you use often. Ten different sequences of mouse instructions can be held in memory



at the same time - each containing up to 100 commands, or 'events' such as clicking, double clicking and dragging.

Mouse Master can be used with any program which uses the mouse, though most of the package's facilities are available from a Desk Accessory, so it is best used with GEM based programs or the desktop.

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Cicero Software Group

Mouse Tricks 2

“You’ll believe a mouse can fly...”

What's so exiting about a mouse speed accessory? Not a lot, unless it happens to be Mouse Tricks 2, probably the trickiest operator you could ever wish to meet. Peter Crush has been using it for ages, but still keeps discovering more of its novel dodges.

Your ST's humble mouse is such a handy tool that you probably take it for granted. Until, of course, you have to use a "PC contemptible" or other computer that isn't equipped with one! What a great innovation the invention of that little rodent was, making it so easy to control computers intuitively. First of the rat-pack was the Macintosh range of computers, with their one-button mice. Then the ST came along with the advantage of a two-buttoned mouse, enabling it to do more things. Soon a range of mouse utilities and accessories such as SPEEDMOUSE, RATTRAP and MACCEL, etc., was developed to add extra features and facilities to the mouse, and very useful they have been. But, beavering away in the background for a year or two, a British programmer has devoted much time and effort to produce a mouse utility to beat all the others into a cocked hat, and the name of this veritable mouseterpiece is Mouse Tricks 2.

A Mouse's Tale

Take one mouse (even the dodgy Atari genus), add Mouse Tricks 2, and the little creature comes to life and flies! Mouse Tricks has been around for a year or two, the distribution being handled by its author Jonathan Lawrence. ST Format had information on it in Issue 34, and earlier with a demo version of it on STF Cover Disk 28. Recently, Jonathan made a good move in deciding to let The ST Club handle the marketing of the program, taking it from an "Authorware" product to a fully commercial one. This should ensure it receives better exposure, and allow him to concentrate on the programming side. Jonathan originally supplied Mouse Tricks with just an on-disk manual. Already packed with features, the latest version of MT2 now has

even more tricks up its sleeve, so many in fact that it's now supplied together with a 67-page A5 printed manual!

Performing mice

So what's so special about MT2, and why should you pay a tenner for a mouse accelerator? The answer lies in the wealth of other features and capabilities incorporated into the program, and the way it can be set up to suit any application, altering itself automatically as you run different ones. For example, you can set the exact speed for the mouse pointer, using very fine adjustment parameters to determine both the speed and degree of acceleration. You might want fast speeds for one program, e.g. your word processor, but normal slow speed for Degas or other drawing programs. No problem: you can set up different speeds for up to 40 programs, and by entering their

names into a dialogue box in Mouse Tricks 2, the correct "Mouse Mode" is activated automatically when they run! Mouse Modes, of which twenty can be defined, can contain many other settings too, such as whether Menus are drop-down or pull-down, and various "special effects" for the right hand mouse button to activate. For example, the RH button can be configured to simulate the Shift Key, useful for multiple selection of files on the Desktop by holding down the right mouse button whilst clicking on files with the left button.

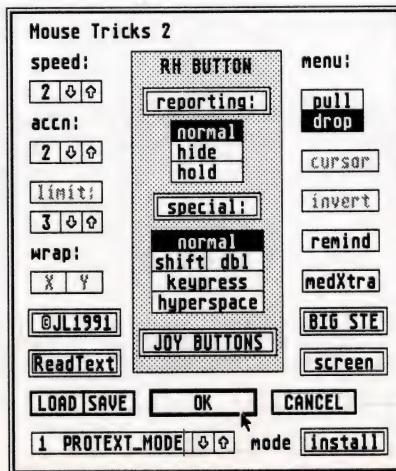
Well-read rodent

Included in Mouse Tricks 2 is a feature called Read Text, and this is worth the asking price alone, enabling you to load in and scroll through text files, useful for reading instructions from disks. OK, so we've all seen text readers before, but Read Text will handle up to

eight different files at once, flipping instantly between them, and you can even mark and save blocks of text. Blocks of text to be saved can be appended to each other, so you could select the key sections of a long text file as you read through it, and thus create a new shortened version as you save blocks to the new file. The Read Text feature can be invoked by pressing defined keys, from a button in MT2 itself, or by double-clicking on the file from the Desktop if you install Mouse Tricks 2 as directed. The length of the document in lines is shown, together with what line you are on. Marking a block of text is accomplished by clicking with the mouse: this can be one line or the whole document. There is even a Search facility - enter the text string and MT2 will find it instantly. The only thing lacking here is a text editing facility. The ability to delete and add text, reformat to a new margin setting, etc., would make Read Text truly excellent. I know that Jonathan is always considering new features and enhancements for MT2, so I'm keeping my fingers crossed on that suggestion!

Widen your horizon

If there wasn't already enough value in MT2, and enough options to keep you playing for hours, also included on the disk is a program called Big_STE. This is an Auto program which provides a large "virtual" screen many times bigger than your standard monitor. When you use a virtual large screen you don't need to click on the scroll bars and wait for the screen redraw to see the rest of your DTP or Drawing document in fine detail, you just move the mouse and it auto-scrolls into view! Most well-written programs are compatible with it, and it enables you to use your small monitor screen as a window of a

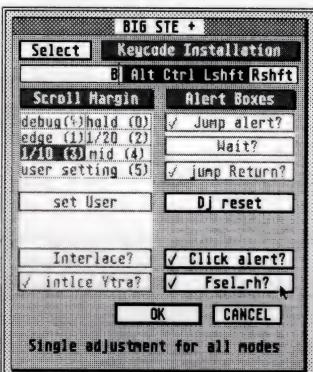


▷ All the settings for your mouse are easily controlled from this panel which can be called up anytime. For example, when Protex runs it automatically switches on these appropriate values which have been preset to suit. Different values can be called by different programs. Very fine adjustment of mouse pointer speed is possible, and they take effect straightaway so you can get the exact "feel" to suit any make and resolution of mouse you may have.



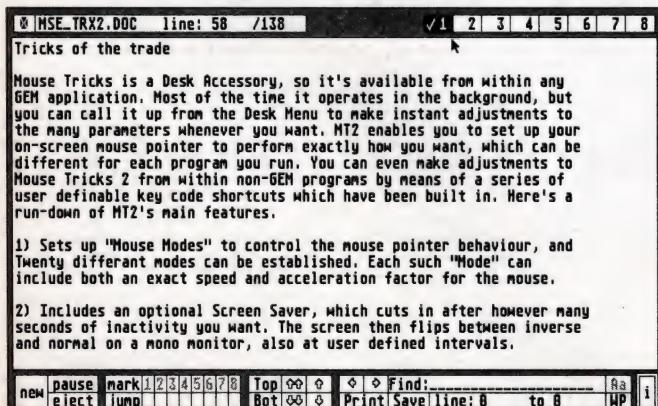
▷ There are some very useful features hidden away in the sub menus of MT2. Fsel_rh, for instance, ensures that whatever settings are active, when any alternative file selector (such as UIS) is called, they are temporarily overridden and the RH mouse button enables multiple file selection. Once the file selector has done its work and gone, the previous settings revert. And if you forget to switch on your DeskJet printer before the ST, "DJ reset" cures that little problem too.

▷ This clever option enables you to determine how much memory your various programs take when run. Protext, for example, would otherwise hog the whole lot and prevent the use of certain useful Desk Accessories such as "The Chameleon". Using the memory limit function cures the problem completely, and is a good example of how many useful little touches are included in MT2 waiting to help in ways not at first evident from a quick look at the program.



much larger workscreen. As the mouse moves over to the edge of the screen, the picture scrolls smoothly and automatically, leaving the mouse pointer visible. The options which can be adjusted in Big_STE are contained in a sub menu of Mouse Tricks 2. By all accounts Big_STE works very well, and I say that as somebody who has not been able to try out the program, as it works exclusively on STEs and I've only got an ancient but much upgraded STFM! It uses the extra video hardware in STEs and Mega STEs to achieve the fast scrolling, and

therefore cannot work on anything older. However, the good news is that Jonathan is working on a similar option which will work on TOS 1.4 and upwards STs. It obviously won't be as fast or as smooth, relying solely on programming sleight of hand rather than hardware. This, then, may be another future enhancement of MT2 to look forward to, or maybe a separate application altogether! Big_STE works in all screen resolutions, and there are four handy preset virtual screen sizes you can select at boot up as well as the option to set your own exact size. If you are



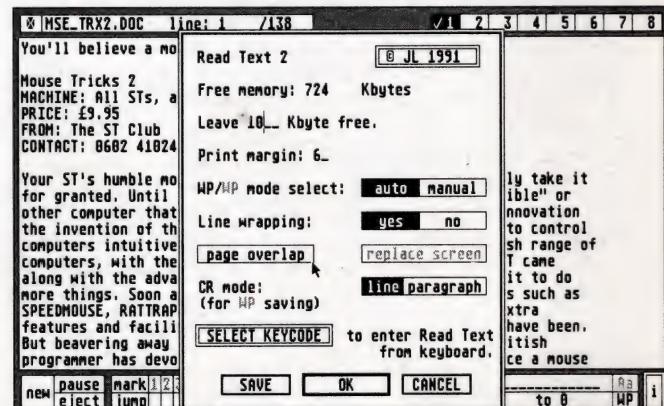
△ The Read Text feature is cleverer than the average text reader. It's the only one I know that can display Protext WP files correctly on screen, as well as First Word and ASCII. The text is easily scrolled up and down using the cursor keys, buttons at the base of the screen, or via key shortcuts. Clicking on the numbers 1 to 8 at the top enable you to switch instantly between eight text files which can be held in memory simultaneously.

Tricks of the Trade

Mouse Tricks is a Desk Accessory, and so it's available from within any GEM application. Most of the time it operates in the background, but you can call it up from the Desk Menu to make instant adjustments to the many parameters whenever you want. MT2 enables you to set up your on-screen mouse pointer to perform exactly how you want, which can be different for each program you run. You can even make adjustments to Mouse Tricks 2 from within non-GEM programs by means of a series of user-definable key code shortcuts which have been built in. Here's a run-down of MT2's main features.

- 1) Sets up "Mouse Modes" to control the mouse pointer behaviour, and twenty different modes can be established. Each such "Mode" can include both an exact speed and acceleration factor for the mouse.
- 2) Includes an optional Screen Saver, which cuts in after however many seconds of inactivity you want. The screen then flips between inverse and normal on a mono monitor, also at user-defined intervals.
- 3) Can make the Menus of GEM programs "Pull Down" instead of the standard Atari "Drop Down" operation, so you have to click on them before they open for you, useful on Drawing programs, etc.
- 4) Mouse pointer speed can be decreased as well as the more normal increase in speed. This will enable a mouse cross-hair attachment such as "Tracey" to trace any size of artwork you like on to the screen.
- 5) MT2 can keep a list of 40 programs, and each one can be set to switch on a particular "Mouse Mode". The amount of memory that each program grabs initially can also be limited by this feature.
- 6) "Hyperspace" option enables the mouse pointer to jump immediately to any any defined point on the screen, or just upwards from where it is, for example to access the Menus by a RH button click.
- 7) MT2 includes "Read Text" feature, enabling the easy reading of disk textfiles, etc., which can be very conveniently scrolled through back and forth. Blocks of text can be marked for saving or printing.
- 8) Includes Big_STE, a virtual large screen option which (although an Auto program) is controlled via dialogues in Mouse Tricks 2. Allows you to auto scroll around huge workscreens with ease on STEs only.

Although there have been a few Public Domain utilities (such as MACCEL, a mouse accelerator, and RATTRAP, which prevents Menus dropping down), none of them rivals MT2, which includes these and every other conceivable mouse-type option possible working in harmony!



△ Even Read Text is full of options which you can customize to your heart's content, typical of the great attention to detail and user configurability of MT2 as a whole. You can set the left margin for printing out, and whether or not the last line of the window will appear at the top when you scroll down a page to ease reading for example. The Manual explains them all, and the more you fine-tune them the more you will enjoy the performance of your ST.

lucky enough to own an STE you are laughing and busy thanking Jonathan and Paul Glover for being so generous in throwing Big STE in with MT2.

Summary

Points For:

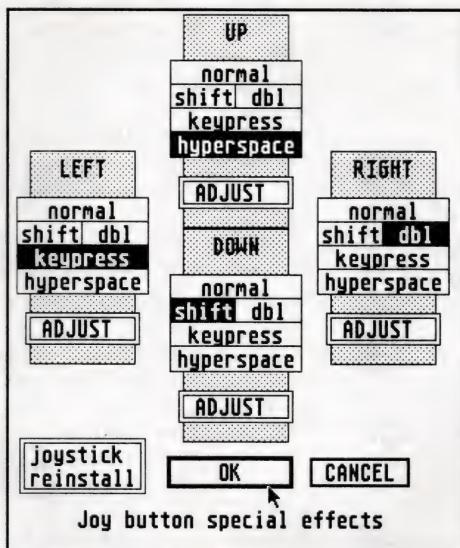
- ✓ Fine control over speed and feel of your mouse
- ✓ Highly customizable, good user interface
- ✓ Full of other useful features
- ✓ Easy to set up

Points Against:

- ✗ So many options in MT2 make it a bit overwhelming at first!

If you haven't tried a mouse accelerator, you really don't know what you're missing. They will ease wrist strain and generally increase the response and pleasure of using your mouse. MT2 is not only the best and most comprehensive such mouse accelerator

around, it's full of other clever and innovative features too. You won't find a better ten quid's worth anywhere else, with enough options to keep you happy for ages and a good manual to read at bedtime! What was always a good program has got better. MT2 is simply a must for serious users.



Product:..... **Mouse Tricks 2**

Version:..... 2.12

Price:..... £9.95

Supplier:..... The ST Club

Telephone:..... 0602 410241

Manifest:..... 67-page A5 manual and d/s disk

System:..... All STs & STEs

▷ Joy Buttons sound a bit naughty, but are actually a clever add-on option. Jonathan Lawrence can supply special extra buttons that fix to the side of your mouse: operated by your thumb, these enable all sorts of amazing extra tricks, such as "Click Delete" which enables you to zap into oblivion unwanted characters or words from within your WP. Full details come with the Manual on how to order and fit Joy Buttons, and a three-button mouse is under development.

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Warp 9 also includes a unique configurable mouse accelerator, desktop pictures, custom screen fonts and fills (72 screen fonts are supplied), and function key control of alert boxes with the F1, F2 and F3 keys. The Warp 9 Customizer lets you create your own fonts and fill patterns. And best of all, Warp 9 is compatible with all the programs you run.

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In the world of Atari publications, only a few advertisers regularly pay out for those glossy full-page spreads but, as a result of their investment, I'm at least one customer who is assured that their products must be good. Professional ads mean professional products, in my mind at least. And so it was with Wordflair which first surfaced about two years ago. It was THE document processor that did everything and it was just what I wanted. I know this, not because I ever bought a copy, but because I liked the magazine ads!

And so to Wordflair II (version 1.11), published by Goldleaf Publishing Inc in the US and distributed in the UK by Hisoft - a company with very nice ads! As has been said before, the ST isn't short of a word processor or two, but there is room for another powerful and flexible application should Wordflair live up to the promise of the advert.

Wordflair II™

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Top, the credits box, and above, the "immovable but delectable" main screen icons.

Wordflair III

Reviewed by Martin Norfolk

The review copy arrived with a colourful cover on a reasonable box but devoid of internal padding. It included a manual, a few loose sheets of FSMGDOS notes, and a Hisoft disk wallet. The disk wallet looks very posh and the manual is well written and laid out - I understand that the boys at Hisoft are busy putting a rather better cover on the plastic spring-bound manual as supplied by Goldleaf. That leaves the loose sheets of notes on FSMGDOS direct from Atari... if FSMGDOS was ever going to be officially released by Atari, then there would be room for complaint. However, FSMGDOS is to be superseded by Speedo-GDOS "in the very near future" according to Hisoft, and it will replace GDOS and FSMGDOS seamlessly. The future of vector fonts on the Atari lies with Speedo, so perhaps we can expect better presentation when that arrives.

As with GDOS and FontGDOS, FSMGDOS or Speedo needs to be loaded at boot-up from the Auto folder of your system disk. FontGDOS and FSMGDOS are both supplied with Wordflair II, but the accompanying notes recommend that only FSMGDOS and its vector fonts be used to save on memory, although bitmap fonts may still be used should you have an idiosyncratic fondness for them!

The very good news is that by using the two accessories supplied it becomes unnecessary to have any contact with the infamous ASSIGN.SYS or the new EXTEND.SYS in your system root

directory. FSM.ACC appears as a 'Font Manager' desk accessory from which the font path can be set, selected fonts can be activated or deactivated, cache sizes set, and default point sizes chosen. FSMPRINT.ACC produces a 'Printer Config' desk accessory option and it's only needed once to install the appropriate printer driver for FSMGDOS, and after that it need not be loaded at boot-up unless you need to switch between different printers on the fly. Using the Font Manager means never having to know about the contents of .SYS and .WID files, and I like it that way.

It is significant that Wordflair is marketed as a document processor and not a word processor. This suggests that it occupies the grey area between word processing and desktop publishing packages, and thus offers a mixture of features from both domains. It could be seen as a WP with extra layout and presentation features, or a basic DTP program with good text editing features, and either way there inevitably must be a compromise in holding the middle ground between the two approaches.

Basic WP

Whatever else it does, even a document processor should offer good basic WP facilities and Wordflair does, more or less. A WYSIWYG display is always more attractive than a text-only display providing that cursor movement and screen redraws aren't too slow. Wordflair cursor movement is slightly slower than

in a WP such as First Word Plus: screen redraws can take 3 or 4 seconds when moving from page to page, and scrolling down a page of text isn't too speedy. This isn't very conducive to quick working if using the program for simple word-crunching essays (or writing reviews!), but then a DTP program such as PageStream can be painfully slow when redrawing pages. Wordflair isn't that slow but other WYSIWYG word processors such as That's Write prove that speeds can be improved.

Printing a typical A4 page of text takes 4'15" on a DeskJet 500 (@300dpi) and again this invites comparison with slow DTP printing speeds. Obviously, printing speeds depend upon FSMGDOS routines rather than Wordflair's efficiency - Speedo will apparently offer performance in keeping with its name.

Other features included are a spelling-checker, a search and replace function, and cut and paste editing facilities, and they're all simple and obvious to use. None of them execute very speedily or offer very sophisticated functions, although the Edit menu includes an option to see what's stored in the clipboard - a nice touch. The dictionary supplied for review was an American one, but Hisoft do advertise an English one and customized user-dictionaries can also be used to supplement the standard one. These are easily compiled when in spelling-check mode. Unfortunately, the spelling-checker cannot distinguish between upper and lower case letters

which thus precludes failsafe checking of proper nouns. For those who use such things, there is an easy to use 470,000 synonym thesaurus, but features Wordflair lacks include a word count facility and a document autosave option.

That main screen display which so attracted my attention initially is very easy to understand given a brief explanation of the icons. It is a shame though that those 10 large icons, the Record_File panel, and the region title bar cannot be removed from view to enlarge the typing area. The rulers can be hidden but they only occupy a small area anyway, so this represents little gain. Once familiar with the program, it seems unnecessary to lose a quarter of the screen to function icons and info panels which could just as easily be accessed via pulldown menu options.

Regions

Wordflair's special features are provided through a system of regions. The blank page that is first presented is called the Background Write region and onto this blank page may be drawn either a Write, Calc, or Graph region to either text, formulae/numbers, or graphs/picture files respectively. These regions are fixed to a particular position on a given page and can easily be moved or resized with the right mouse button - great DTP flexibility. Another type of region is a 'floating' region defined by block-marking a portion of background text and selecting the float option under the For-

mat menu. The idea is that a floating region of text will move like a raft upon the 'sea' of edited background text, but quite how this is different from a normal, unfloating paragraph is unclear. Sadly, Write, Calc or Graph regions cannot float - now that would have been a great feature.

Write Region

This is a region to contain text. Fonts and attributes are assigned in the same way as for background text, i.e. by highlighting a block and then selecting options from the Character option of the Format menu. Headers and Footers are simply Write regions positioned anywhere on a page and containing the desired text, and then designated as a Header/Footer from the Format menu. Once placed on the first page on which they should appear, they will be repeated on every successive page when printed.

Calc Region

This region displays either the numbers entered into it or the product of any equations constructed in it with the 12 functions available - these are simple mathematical, financial, or logical functions. This embryonic spreadsheet facility allows for cross referencing between regions by entering the required region title within the equation. Unfortunately, the region's format can be set to display a Dollar sign but not a Pounds sign. I can't help but wonder who will use this excellent facility considering the few functions available against their ease of use. Nevertheless, it's a unique and impressive feature.

Graph Region

This region can display either a graph derived from directly input figures and/or the products of given Calc Regions, or an imported picture file in either IMG or GEM format. The graph can be either a bar graph, a pie chart, or a line graph with X and Y axis labels and data labels; and the display will be varied proportionally to fit into

the given region. When using a graph region to display picture files, I found that IMG files saved by Imagecopy will not work when they include Palette information, so set IMG Palette to No under the Image Format menu of Imagecopy.

Problems with FSMGDOS

Although it was easy to install, FSMGDOS is unstable in use. The accompanying notes indicate that Goldleaf anticipate problems and they suggest that the FSM cache sizes might need to be increased. The review copy of Wordflair first bombed out whilst trying to print and at first it was necessary to use the Font Manager accessory to increase the Character Cache to 210K and the Miscellaneous Cache to 140K (the Bitmap Cache was set to zero as I wasn't using any bitmap fonts). However, as I tried to print out my initial eight pages of notes for this review, a more serious crash resulted in the document file being corrupted to the point where it crashed the whole system whenever I tried to reload it. Hisoft attribute these problems to FSMGDOS and not Wordflair, and on their advice I succeeded in completing my notes only by increasing the FSM Character

Cache to 400K and the Miscellaneous Cache to 600K!

This effectively means that 4MB would be the minimum RAM necessary to run Wordflair, FSMGDOS, nearly 1MB of FSM Cache RAM, and a few accessories without problems. The manual suggests that documents be kept small because the program itself requires a substantial chunk of memory so there isn't much room for data. It doesn't suggest a maximum document size and the program fails to give any indication of remaining memory; when it crashes and/or corrupts your document file you know you're out of memory! Large documents (approximately 10 pages of 12pt text) slow the program's operations down noticeably and this is the only warning available. A commercial WP which struggles with a 10 page document stands a limited chance of success, but this restriction would be understandable for a DTP program with only 4MB RAM.

Wordflair aroused my suspicions when alert boxes appeared intermittently to announce "Beta version, Congratulations!" but apparently these are produced by FSMGDOS - the cause of most

of Wordflair's problems. But with the promise of Speedo and the excellent Bitstream fonts it uses, I am confident that Wordflair will then be able to prove its worth.

The Bottom Line

I used a Mega 4, a mono monitor, TOS 1.4, and plenty of hard disk space for this review, and I wouldn't even try to use Wordflair II on a regular basis with anything less. Goldleaf suggest there may be problems with TOS 1.0, but I can't imagine there are many users with hard disks who haven't got at least TOS 1.2. A casual Atari user (is there such a person?) is therefore unlikely to be able to run Wordflair and yet it is just this type of user who could find it most useful. It isn't a 'power' program in any respect, so serious Atari users are unlikely to find a niche for it, but if you need a WP with good DTP features, good mailmerge facilities, and WYSIWYG vector fonts, then Wordflair is good enough to throw in a simple flatfile database feature, and some numerical functions as well. It certainly is a great concept and I think it just might be hugely popular.

FSMGDOS is flawed and futureless, and Wordflair needs Speedo now. With the promise of Speedo and a few added features all round, it could become a real conqueror, and this time I might actually buy a copy!

Product:.....Wordflair II

Version:.....1.11

Supplier:.....Hisoft,

The Old School,
Greenfield,
Bedford
MK45 5DE

Tel:.....(0525) 718181

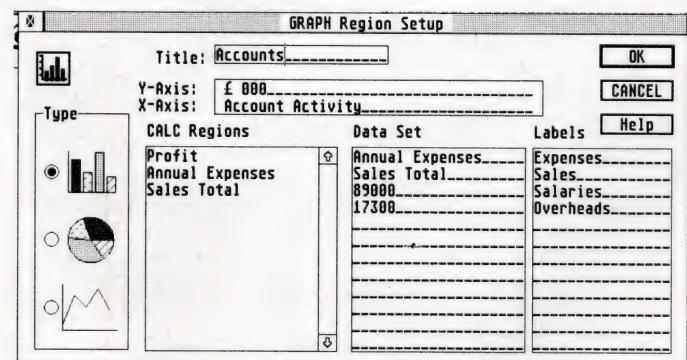
Price:.....£129

Manifest:.....One manual

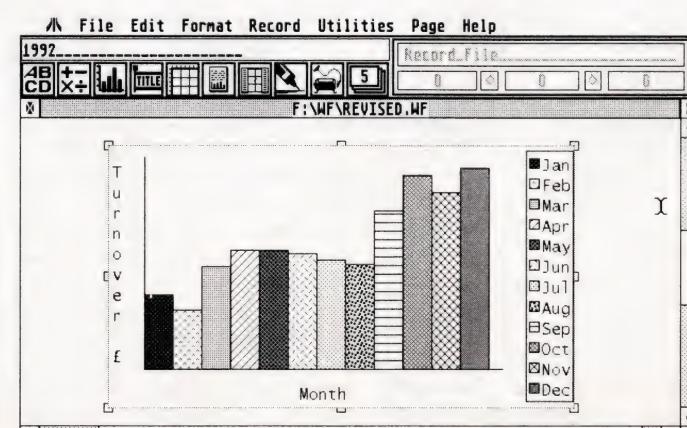
256 pages,
Hisoft disk
Wallet, 6 DS
floppies, loose
leaf FSMGDOS
notes.

System:.....ST/STE, 2.5MB

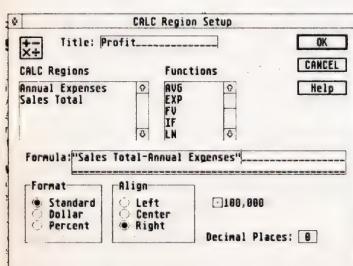
RAM min, 4MB
recommended,
two disk drives,
hard disk
recommended,
ST medium or
hi-res monitor.



△ The Graph Region set-up options.



△ A Graph Region displaying its data in the form of a bar graph.



△ The Calc Region set-up options.

Disk and File Operations	
Load a text file	F4
Merge a text file	F5
Save encrypted text	F6
Save a text file	F7
Save using text filename	<C>F7
Load text macros	<S>F9
Save macros to disk	<S>F10
Show all text macros	<C>D
Dictionary	
View the dictionary	<C>V
Spell check document	<C>X
Text Block Options	
Block start	<C>A
Block end	<C>Z
Use the block	<C>U
Clipboard	<C>Y
Mark a line of text	<C>M
Jump to marked line	<C>J

Text Formatting	
Alphabetize/sort	<CS>A
Reformat document width	<CS>R
Reformat full out	<CS>F
Reformat flush left/right	<CS>L
Format text into columns	<CS>H
Double spacing	<CS>D
Page preview	<CS>P
Auto or manual indent	<CS>I
Center one page	<CS>B
Mail Merge Database	
Enter mail merge database	<S>F6
Insert mail merge salutation	<S>F7
Insert mail merge address	<S>F8
Document Changes	
Switch transposed letters	<CS>T
Insert special characters	<C>INS
Erase the document	<CS>CLR
Destructive TAB	<CS>TAB

Miscellaneous Functions	
Calendar	<C>Q
Typewriter mode	<S>T
Remove command line	<A>UNDO
Word count/document status	<CS>C
Display page breaks	<A>B
Access desk accessories	<A>A
Configure dbWriter	<A>C
Print Options	
Printer drivers	<A>W
Print current document	<A>P
Moving Around	
Go to a line number	<C>G
Go to a page number	<C>E
Flip between text buffers	<C>F
Search (F10 continues search)	<C>S
Custom ruler line	<A>T
Go to top of file	<CLR> or <C>T
Go to bottom of file	<C>B

At the end of the day, word processors are just tools for a job. The simpler they are to use, the happier the writer should be. Those that do not yearn for the power of Protex and find STWriter's control codes cumbersome probably use First Word Plus. This handy word processor sits rather nicely in the middle, being both easy to use and reasonably well featured. First Word Plus may have its faults, but many users will remain committed to it, at least until something better comes along. Paul Cooper takes a look at a possible successor.

Starting life as an experiment in custom interfaces, dbWriter 1.4 is more straightforward in use than First Word, whilst still retaining drop-down menus and keyboard shortcuts.

Fitting (just) into a 520 when accompanied by its 40,000 word dictionary, the programme leaves little room for large text files. Serious users will need to step up to a 1MB, or not use the dictionary. 520 owners can opt to load the dictionary in two halves and check their text in two separate passes. This works fine, but takes over twice as long - a 20,000 word most-common-words dictionary would be a better idea.

Command line

Like Protex, dbWriter has a command line running along the bottom of the screen. Information is given here on Left and Right Margins, Page Length, Caps Lock status, and remaining memory.

Also on the Command Line is a quick selector. This grid gives rapid access to Saving, Loading, Printing, and the Dictionary functions without the need to be bothered with drop down menus or

keyboard shortcuts.

A nice touch is the ability to scroll the screen using the mouse buttons. This is much faster than First Word's GEM-bar scrolling and easier to use.

Drop-down menus

There are only three drop-down menus - but they contain a wealth of options giving a fair approximation of dbWriter's power.

Left: the file handling menu which loads the dictionary and controls the clipboard as well as macros; centre: the formatting and the Mail Merge database menu; right: this menu has various functions including the internal printer driver and a configuration option to load the dictionary and/or the mail merge when booting up.

card index database and a typewriter mode.

However, using the menus turned out to be a less than reliable way of moving around dbWriter. Often making a selection from a drop-down menu would merely exit me from the menu instead of performing the desired function. The keyboard shortcuts listed in the manual and on the drop-downs were a far better alternative. I eventually settled for using the menus only as reminder of the keyboard shortcut! And there are a lot of these shortcuts, with dbWriter making full use of the Alternate, Control and Shift key combinations. Unfortunately some of these shortcuts (Control X =

selection to configure the programme. An Epson compatible is supplied as the default and altering this to another just requires certain decimal codes (found in most printer manuals) to be entered when prompted.

Converting dbWriter to a Deskjet 500 took just a few minutes reading to find the right codes. Unfortunately, the page layout took substantially longer to get right, particularly the top margin and the page breaks.

Spell checker

This is a 40,000 word Ascii file of American origin. This didn't cause me too many problems, and in any case a supplementary file of your own words can be added at the end of each session.

Doing a spell check on a text is slower than with Protex but comparable with First Word Plus. It is also much easier than First Word to use, as all the dictionary commands (except text entry) are available by mouse selection. The number of words offered to select a correction from is significantly greater. Down points include the absence of continuous spell checking and no 'guess' function.

Mail merger

The Mail Merger is basically a card index database which utilises a simple system to create a powerful accessory. Using a "Dear [Shift 7]" combination in your letters

dbWriter

All the popular word processing options are here: clipboards, spellchecking, transpose letters, access to desk top accessories, and the reformat text commands. This includes a useful option to sort text alphabetically or into columns (DTP style). There is even a simple

Spell Check, and Alternate X = Purge Dictionary from memory) looked dangerously like accidents waiting to happen.

Printer drivers

dbWriter has no external printer driver and relies instead on a menu

▼ The command line running along the bottom of the screen gives rapid access to a variety of functions without using drop-down menus or keyboard shortcuts.

LINE	PAGE	WORD	LEFT	RIGHT	PAGE	SYSTEM MEMORY	CAP
1	1	WRAP	1	80	60	140956	↓

enables information from the database to be effortlessly included in a text. Whilst the system is limited by the available memory (520 owners need not apply), it is easy to operate and more or less foolproof.

Cake icing

As with all modern word processors, there is a variety of different frills which you may or may not find useful. Global search and replace is handy, the block functions for italics, bold and reformat to upper case are truly useful, and the calendar is great if you are without a diary.

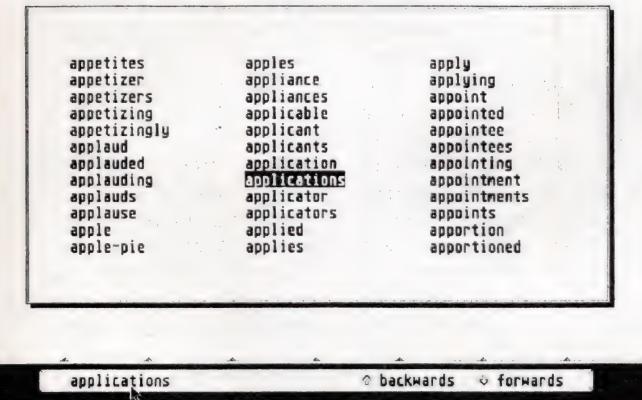
dbWriter vs FWP

dbWriter works by making itself as unobtrusive as possible: entering text is quick and painless. During testing many of dbWriter's functions proved either superior, faster, or just plain easier to use. Perhaps the most surprising feature is the

powerful Mail Merge and its compatibility with my old First Word files, converting them with barely a quibble. Despite dire warnings in the manual to backup regularly, dbWriter only crashed once during the many hours I used it.

However, there are a number of snakes in this paradise. The first one is the youthfulness of the programme. At this stage in its development the poor reliability of the drop-down menus and the ambiguity of some of the keyboard shortcuts can lead to some very nasty mistakes.

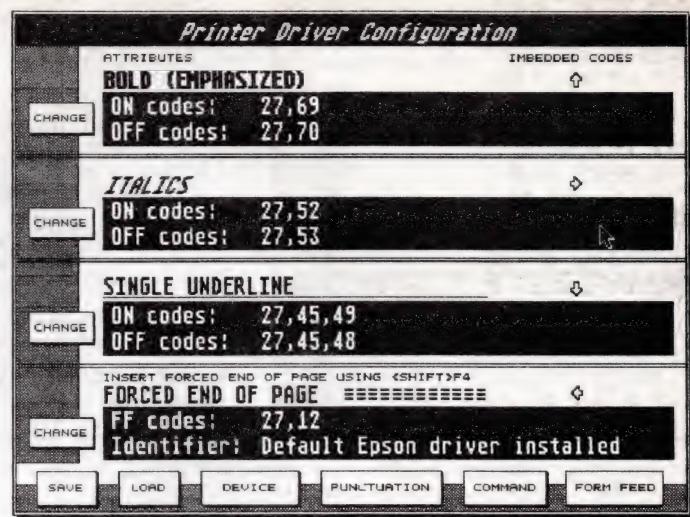
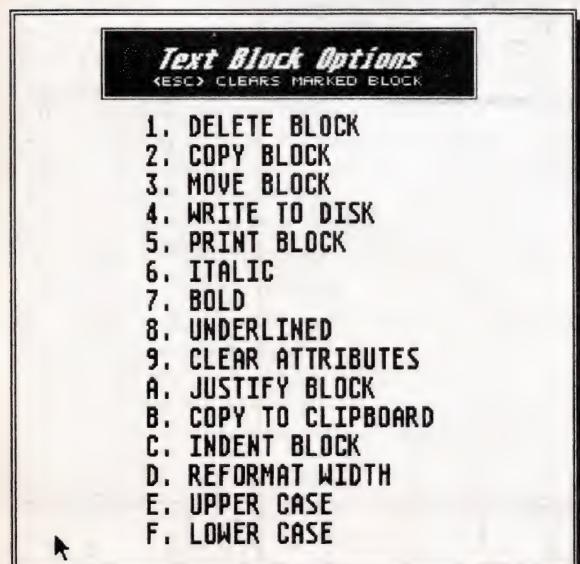
Other minus points include the amount of memory the program devours when running with the dictionary and/or the mail merger, and the lack of any external printer drivers. I would have preferred to see some kind of compatibility with First Word drivers, of which there is an abundance.



△ During spell checking all functions are accessed via the mouse.

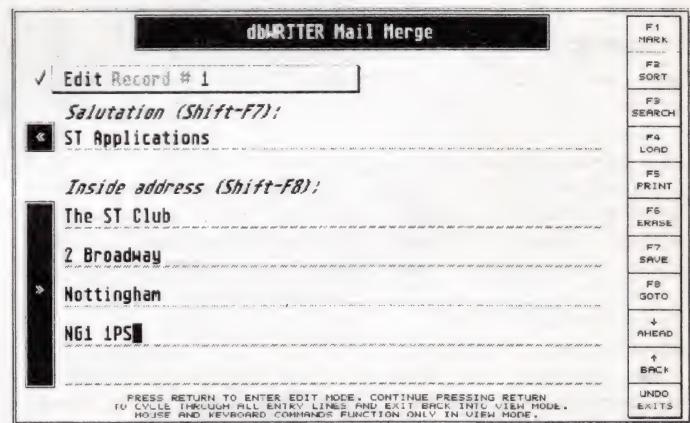
Note the large choice of words to select from.

▽ The Block command is called up after a block is selected with the mouse. The options are very comprehensive.



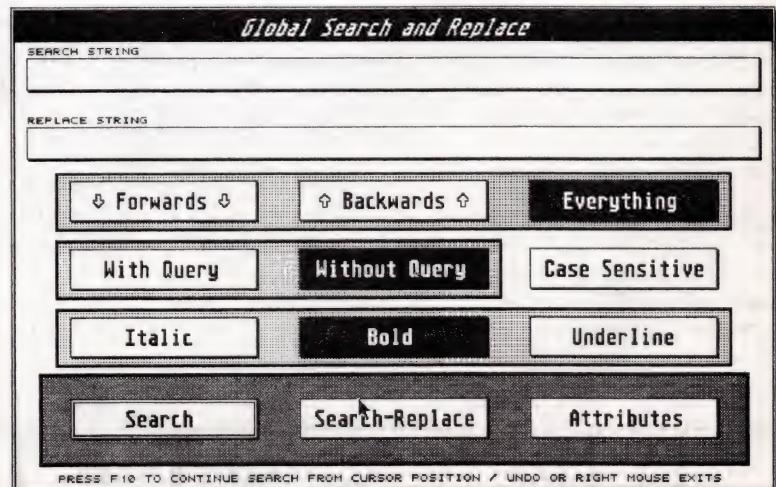
△ DbWriter uses an internal printer driver which can be altered to your own requirements and then saved.

Epson compatibility is the default.



△ The Mail Merger is in fact a simple card index database.

▽ The Global Search and Replace dialogue.



Superbase Personal version 1 is an old program from 1987 and has since been updated with version 2 and developed into Superbase Professional version 3. A Windows version is available on the PC, the latest now renumbered to version 2. Precision Software have sold the PC rights to SPC in the US although the original UK Precision team are still responsible for the development of the package. The ST and Amiga versions were sold to Oxxi Inc. who are supposedly developing updates, although only Professional 4 for the Amiga has emerged.

Overview

Superbase is generally an easy program to use and well known for its good interface typified by the VCR type buttons at the bottom of the screen.

The first nine buttons enable easy access to records with quick movement through a file. The Key Lookup button is used to retrieve individual records based on the current active indexed field. If this field is unique then use of this button can present the required record very quickly. The Filter button enables the selection of records matching certain criteria that you specify in the Filter dialog. This is a powerful feature and one that must be mastered to get the best from the program. The last button looking like a camera, is the External File button and used to activate a unique feature of Superbase, that of displaying an external file whose pathname is included in a field. Such files can be ASCII text files or picture files of *.PIC, *.NEO, *.IMG and all Degas formats, even in high resolution! This one particular feature of Superbase makes it, for me, indispensable.

Superbase calls itself a relational database program. That means it can work on multiple files containing different fields and values and link them together when making a query report. Queries allow the user to produce formatted output from one or more files with control over the

Superbase Personal

Tutorial – Part One

Background and Planning

Superbase Personal version 1 has been packaged with STs for some time now and is also available as the "An Introduction to Database Management" program in Atari's "Introduction to Professional and Programming Applications" series. As the de facto ST/TT database program a lot of users are interested in its capabilities. Mark Baines starts a series of tutorials for those new to Superbase.

fields selected and presentation on screen or paper. The relational aspect of Superbase only applies here and can't be used to input values from one file into the field of another, a facility I've frequently wanted.

Other features of note are the import and export options. Here, selected fields can be exported in an ASCII file format or imported from other programs, such as spreadsheets or other database programs perhaps on different computers. The format is that of a list with field and record separators that are user-selectable, an important option.

Mailing labels can be printed from within Superbase up to four across a page. There is extensive configuration capabilities here to allow for different sizes and arrangement of labels.

When using the Filter dialog either on its own or as part of a Query or other function, many functions are available to write suitable expressions to obtain the data required. Unfortunately these are very badly documented in the Superbase manual in Appendix C with no detailed illustration

of their use. The query language is a weak part of Superbase Personal although Appendices C and D (Reserved words) do tantalizingly indicate that some scope is there if only it were documented properly. The manual is otherwise an excellent example containing many tutorials with good explanations on the whole.

Tutorial

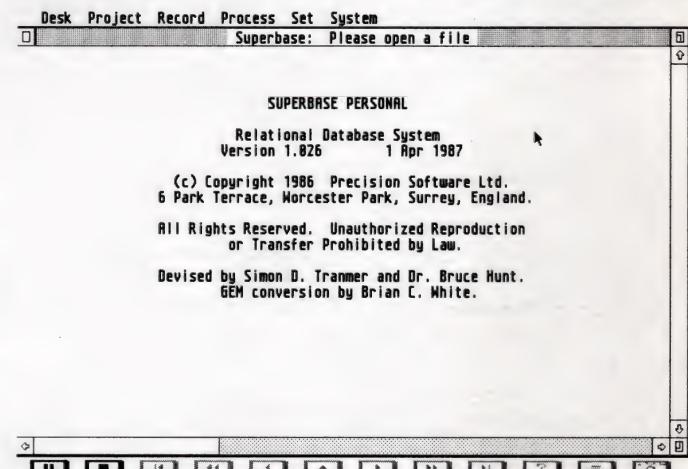
In presenting this tutorial I have assumed that you installed the program, read the manual and fol-

lowed the tutorials therein and so have some idea of the workings of the program. The version of Superbase I will be using is Superbase Personal v1.026, the most widely available version. Version 2 owners should have no difficulty, however. Please read the Database Theory section of this article to improve your understanding of the terms commonly used when referring to databases.

The Plan

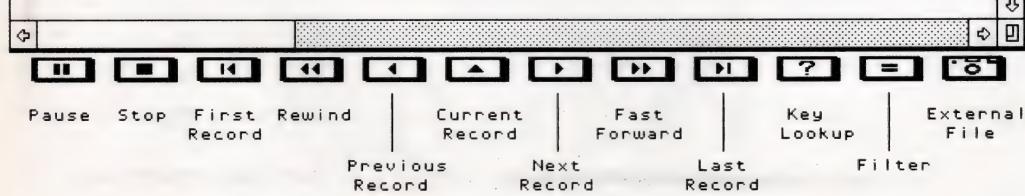
The most important aspect of using a database program is the initial design of the structure of the record to be used. It is vital to plan this on paper, writing down the items of data (fields) you want stored, their types (Text, Numeric, Date etc.), length and order. The names of fields are important to suggest what the data in them signifies and their type establishes what calculations and manipulation can be made on them. The ordering of a Text field containing some numbers will give very different results to the same numbers in a Numeric field. A Date field may also contain numbers but the last two or four 'year' digits have precedence over the others when ordering, for instance.

Superbase uses Fixed-Length fields which means that each field will take up the same amount of storage space on disk and in memory whatever its contents, even if empty. This makes searching and manipulation of the data



easier and quicker for the program but if the length of a field is not chosen carefully it can result in over-long files. The order of the fields when entered at the File Definition stage determines the order of data entry into them. Although these fields may be rearranged on the screen in Form View, they cannot in the Record View and the cursor will still jump from field to field in the order as

Superbase control panel



displayed under Record View. Once entered into the definition, the order of the fields is static and so careful planning is required here beforehand.

Magazine articles database

I often need to refer to magazine articles for information at a later date. It is frustrating to have to flick through many copies to find what I want. I therefore designed a database to store the article details in issues of ST Applications.

I came up with the list of fields shown in Table 1.

Most fields are self-explanatory. The Article Type field will be useful for getting Superbase to search for all articles of a particular type, say Software Reviews, Programming Tutorials, Feature, News etc. I have a list of eight

categories. You can chose your own types depending on personal preferences. The Listing Source field will be useful in my programming activities. Here, I intend to enter the type of program source code (C, Assembler etc.) if that article contains a listing. If that listing is available as a file on disk, I will enter the file pathname in this field. Subsequent clicking on the External File button will show that source code file in a window for my perusal.

I have chosen some of the fields to be Required, which means that Superbase will alert me if I haven't entered any data for that field. Note that not all articles have Authors and the last two fields also won't necessarily have entries.

Next month, we will define a file and enter data into it.

Table 1

Field Name	Type	Length	Other attributes
Magazine Name	Text	20	Required
Issue	Numeric	3, integer	Required
Date	Date	dd mmm yyyy	Required
Article Name	Text	80	Required
Article Author	Text	25	
Page No	Numeric	2, integer	Required
Article Type	Text	30	
Listing Source	External	35	

Database Theory

A Database has the following Data Hierarchy:

Bits (smallest amount of information)
Characters (bytes)
Fields
Records
Files
Databases (largest amount of information)

Groups of Bits form the ASCII code of the Characters used to represent the data. A single group of characters is often referred to as an Item, so that "Mark Baines" consists of two items.

A Field is an area on a record that contains a particular piece of information or group of items pertaining to the same thing, fact or attribute such as a name field or date of birth field. The type of fields depends on the type of file itself. An Address file won't contain fields relating to your video tape collection. Each field has three essential properties, a name, a value (the data item) and the item's representation (the length and type of data).

Data can be of various types. It is very important to decide which

format you want when designing a database file. The main two types are Text and Numeric. Calculations can only be made on numeric data and not on numbers contained in Text type fields. There is usually a Date type available (again sensible manipulations can be made with this, i.e. when ordering by date - earliest first - 120392 will come AFTER 300691 which on the face of it is the larger number) and Superbase version 2 has a Time type. A Currency field is a type of numeric field, often with two decimal places and the currency sign in front. The Enumerated type is not found in Superbase. This is a field where the item

choices are displayed for you and you choose the correct one when entering data, such as a Sex field where the choices would be Male or Female.

Some field types can be Calculated or Derived types, where the items are obtained from other fields and/or calculated upon and automatically entered on the record by the computer.

A Record is a set of related fields about a thing or person. An address record would consist of a name field, address field and a telephone number field for one person only.

Files are sets of related records that give a complete set of information about a particular subject.

Databases are a logical collection of files for a particular application. For instance, a video hire shop may have a club members file, a stock file, a finances file, a debtors file, etc.

To enable database programs to quickly search for records and

to provide a sequence or order for them, Indexes are constructed and used. These are separate files corresponding to one particular field which keeps a copy of the data entered into that field in alphabetical, numerical or date order depending on the field type. One particular field is usually designated as being unique, that is, no data value entered in it is repeated in another record. This is the Key field. Several fields can be indexed, but the more indexes you have the more disk space they take up.

A program that handles files and databases is often itself, inaccurately, called a database. Its correct title should be a Database Management System (DBMS), in other words, a system of programs (maybe integrated as one large program) that can access, add, modify, retrieve and manipulate data and also provide facilities for data integrity and security.

Table 2

Field Name	Field Value	Field Representation	
		length	type
Magazine Name	"ST Applications"	20	Text
Issue	"23"	2	Numeric
Date	"1 Nov 1992"	11	Date

Bell, Book and Candle

Ditch Day Drifter

By Micheal J. Roberts, USA
Supplied by: Public Dominator, PO Box 801, Bishops Stortford, CM23 3TZ

A senior college student creates a lock that can only be opened with a key made from various items, which are cryptically hinted at. Put another way, it's an intellectual scavenger hunt.

Ditch Day is memory-resident on a 520 and that includes the Parser, so there are no time-consuming disk accesses. However, the parser is still complex enough for most inputs and features OOPS, as well as abbreviations of common words. One of the more unusual features is the ability to scroll the screen down and examine what occurred up to twenty pages beforehand.

There is a real sense of humour in Ditch Day with play being virtually unrestricted: nearly all objects can be examined, manipulated or even talked to, usually with a humorous response to match. Infocom in style, this is the best text-only adventure I have played for a long time.

Any ST, Mono/Colour
Overall 7/10

Wizard's Tower

Supplied by: Syntax Adventure Magazine, 9 Warwick Road, Sidcup, Kent DA14 6LJ

This is a standard Dungeons & Dragons role play adventure which is done with some success. The plot is a standard tale of an apprentice magician (you!) on a mission to rescue his master from the Mystic Tower, a building crammed with nasty creatures. Armed only with a dagger and a small book of spells you venture in....

Wizard's Tower is a fine example of what can be achieved using STAC and proves that D&D adventures need not be dull, with the occasional picture adding nicely to the atmosphere in a minimalist fashion. The parser, adequate for the job, allows movement and the casting of spells with smooth simplicity. A well thought-

Fed up with lasers, masers and phasers? Blocked off with the latest Tetris clone? Then try broadening your horizons with something that requires a little more intelligence! Paul Cooper checks out the alternatives.

out adventure with plenty of puzzles.

Any ST, Med.res. Overall 6/10

The Mystic Well

By: Jim Todd, USA
Supplied by: Public Dominator

In a far away land a powerful wizard proclaims himself God. You are the brave (foolish) adventurer who must break into his citadel and kill him. No mean feat considering there are ten floors to negotiate and each one is full of overgrown worms, large spiders, and worse.

A simplified Dungeon Master clone from America, it copies its idol with a passion, although there are limitations to the comparison. Only a team of one is allowed (the instructions mentioned two players, but I couldn't get it to work), and the casting of spells is also a lot less detailed. Some atmosphere has been retained and even though there is little in the way of sound effects, the "gotcha" tension is still strong. Detailed graphics are viewed in 3D and objects, which lie around in the usual illogical fashion, may be picked up and manipulated in true DM style. Mystic Well is big step forward for shareware games. When a minor STE incompatibility is sorted out, then Mystic Well should be in everyone's disk box.

Not STE, Med.res. Overall 8/10

Infiltration

By: Robin Ball
Supplied by: Public Dominator

Your mission (Jim) is to infiltrate an enormous alien space ship and lay mines on some large yellow crosses that are rather handily dotted about. Getting to these crosses is, however, another mat-

ter as the ship is full of puzzles and traps.

Created using the prohibitively expensive 3D Construction Kit from Incentive, Infiltration looks and feels exactly like a Freescape commercial game; enter a room and you can look up, down and at all areas of the room in glorious 3D.

It's difficult to fault a game as good as this, for even in slow mode the screen update is pretty fast. Perhaps the only thing to let Infiltrator down is the somewhat absurd plot, but there are more than enough puzzles throughout to help you forget it.

Send f.5 to the author and you get a map, a poster and any help you might need, and you'll also be entitled to his next game for just the price of a disk.

Any ST, Med.res. Overall 8/10

Professional Un-Glue

Getting stuck in a good adventure or a bad one can be really frustrating, so you'll pleased to know there is a Professional light at the end of the maze...

Syntax Disk Magazine

Edited by Sue Medley

Syntax is a disk-based magazine aimed at all levels of adventures, including shareware. Each issue contains news and reviews, with screenshots and maps of commercial products. On top of this there are several pages of help and even complete solutions, and for players who are really desperate, a hot line telephone number.

SYNTAX is produced using STOS and is one of the simplest disk mags I've ever used; all the options are there except (sadly) Mono.

Any ST, Med.res. only.
Overall 8/10

And now for something completely different...

Adventure Games come in a variety of different formats, and some are not strictly adventures at all...

Larn V12

By: Cornelius Caesor, Germany
Supplied by: The ST Club,
2 Broadway, Nottingham NG1 1PS
Tel: 0602 410241

Larn is one of those magical games which looks total rubbish, yet plays like a dream. The plot involves a quest to find the cure for a strange disease afflicting your daughter. Unfortunately this cure is guarded by a bunch of vicious monsters in the Caverns of Larn. It's worth mentioning at this point that although the graphics are a big disappointment, this does not effect Larn's addictiveness. There's a lot more to playability than just flash graphics. Larn has true depth of play and an enormous area to explore. Highly recommended.

Any ST, Mono/Colour
Overall 3/5

Paranoia

Supplied by The ST Club

Based on the popular role-playing game of the same name, this adventure uses a multi-choice selection system instead of a parser, a method which fortunately adds to, rather than detracts from, the game. Paranoia is a world controlled by a computer who may or may not be your friend. In actual fact you can trust nobody in Paranoia, least of all the computer. Your mission is to track down anyone who still insists on celebrating Christmas. Good stuff.

A great little adventure that is full of humour, but is unfortunately far too short.

Any ST, Mono/Colour
Overall 4/5

System 5

By: Glen Humber, Nottingham.
Supplied by: The ST Club

Modem communications is great fun but damned expensive. System 5 is for those of you who

yearn for the excitement of on-line technology but dread the BT bill. Here you are a MIND agent investigating cases of computer espionage, but who do you trust when even your own organization is suspect? Selected to find out who is doing what, to whom and why, you must tread very carefully. The first point of contact is a letter from your boss, and after that you're on your own.

Playing System 5 is similar to being connected via a modem to a Bulletin Board. You log on, enter the appropriate code words and gain access to a wealth of information. One contact can lead to another and so on, with coded messages becoming increasingly more cryptic. This is a massive game which needs lots of time and patience to finish, but ultimately is worth the effort.

Any ST, Mono/Colour. Overall 3/5.

Sherlock

By: Rudolf Tiemann

Supplied by: The ST Club

Sherlock is best described as an inter-

active version of Cluedo. George has been killed and you are only told where and at what time. By questioning the other occupants of the house you try to build up a comprehensive picture of who was where and reveal any inconsistency in their alibis. Play is entirely graphical. To question one of the suspects, highlight a name and then click on either a room in the house or enter a time. This gets you a short piece of text explaining that suspect's whereabouts, who else was there and sometimes even a description of sounds from neighbouring rooms. Lots of facts are given to you at this point, which requires loads of scribbling. Sorting it out is not easy and I found the game far more enjoyable when played in a group. Not strictly an adventure, but still well worth getting and very easy to use.

Any ST, Mono/Colour. Overall 4/5.

Handy Hints & Tips

Some commands can often be abbreviated to save time: i.e. North = N; South = S; Inventory = I or INV; Examine = EXAM; Describe location = LOOK or L.

Always carry out a personal INVENTORY at the start of the game, just to check what you already have.

EXAMINE everything that can be examined.

If completely stuck, try something stupid. It might just work.

Always save your position before trying something really stupid. Alternatively try pressing HELP.

If your hands are full, try WEARING an object. Remember jewellery can be worn as well as clothes.

If the above fails, try to find a large receptacle and put everything inside. A basket, barrel or even a pocket will do.

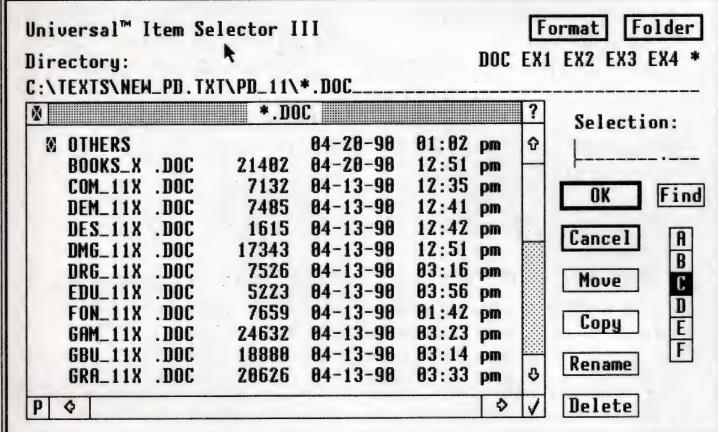
If you get caught in a maze, drop objects at the intersections to mark your progress and MAKE a MAP.

Always make a map. Detail any important objects/locations.

If you kill anyone, don't forget to examine the corpse. Yuuuch!

Always read the text carefully. The clue is often in the question.

Save your position REGULARLY.

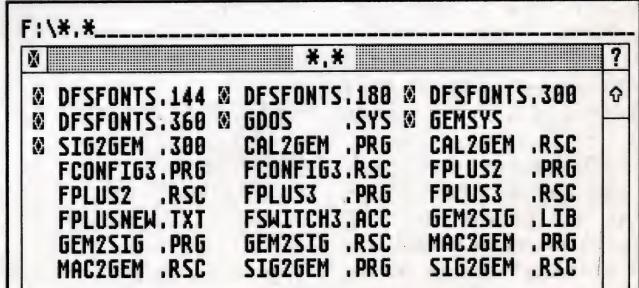


- Ignore current file name conflicts: UIS III can be forced to ignore any file name conflicts during copying or moving files
- Three different window layouts with two font sizes; movable UIS III window
- Instant free RAM report at any time
- New Quickpath feature: up to ten file paths may be stored and recalled on a function key or with a couple of mouse-clicks; filename may be used as filenmask
- Full or partial directory printout with option to set form feed and left indent
- file show and print: control codes converted to spaces for easy viewing of WP files

Universal Item Selector III

New Features for UIS III

- Built-in Default Configuration Ability
- New Lasso Functions: bi-directional lasso with automatic window scrolling
- New Multiple File selections: left click with shift key or left click with right button depressed
- UNDO function: file operations may be aborted by pressing the Undo key
- Re-set or cold boot from the keyboard
- change file attributes: Read/write, Read only, Show, Hide & Touch



£14.95 from the ST Club

PD Update 12.9

All disks in this update are Double Sided. Because we have re-organised many sections of the main PD catalogue - in preparation for version 13 of our catalogue - there will be some items on these disks which are duplicated on earlier disks in the current catalogue. Files in this update are only new versions of programs where the version number has increased. This will all settle down with the launch of our new catalogue early in the new year. All being well, subscribers will receive a free copy of Catalogue version 13 along with STA issue 27.

Colour Demos, and Slide Shows

SSC.116: KARMIC - Slideshow of pictures generated with Kozmic 2. Features some nice eyeball blasting psycho screens. Includes a promo' for Kozmic 2.

SSC.117: MORE KARMIC PICTURES

SSC.119 and 120: THE FANTASTIC ART OF TOBIAS RICHTER - Full screen photochrome pictures. Very good pictures, that use an interlaced ST palette. Flicker from the interlace is bearable. Superb pictures that cover Science fiction, art, and ray-tracing.

SSC.121: AMIGA IFF PICTURES - Backgrnd, Bfg, Cheetah, Hi5, Honda, Hornet, Jagx7, Porches9.

SSC.122: GIF PICTURES - Amber, Amdekar, Balloons, Bud, Clown, D15, Eag, Example, Glass, Kym256, Portrait, Sambaru, Terri.

Home & Business Demos

UTI.309: ADDRESS v1.5 - Demo of a telephone and address book utility from Degsoft, Limited to 20 entries, and printing is partially disabled. Features of the program include dialling of telephone numbers via modem, telephone call duration timer, and also post addresses to another application, such as a word processor. Full version available from ST Club - see advert in elsewhere in this magazine.

Educational Software

EDU.38: FRANGLAIS 4 - French tuition. Courses on this disk are: 2nd and 3rd conjugation verbs, going places, time and motion; GRAPHICS WITH MATHEMATICS - demonstration of creating line art graphics using Fast Basic; KV ADDUP - animated maths program for youngsters (C); KV GEO 1 - tutorial and guide through the solar system - very well laid out and informative program (C); KV GEO 2 - very interesting program about the Sun, Earth and Moon, and the way they affect each other - lots of information on this disk, including animations of the moon landings (C).

Calamus Fonts

FON.133: CAL FMT - Calamus font file format plus example program; CALAMUS FONTS - isabella, helvetica bold, univers; CHROME - Calamus font; HORSTCAP - Horst Caps, a "curly-Q" display head font for Calamus; MICRON - Micron Demi and Micron Bold Extended fonts for Calamus; MINI 6 - a font for Calamus, specially designed for printing at 6 point on a 300 DPI laser.

PageStream Fonts

FON.134: CRYPTFNT - Cotton and Crypt fonts for PageStream with Type 1 and Type 3 (for UltraScript) PS files; ROOST - Postscript font for PageStream.

Adventures

GAM.209: OPERATION BLUE SUNRISE v3.00 - a STAC adventure from Digital Insanity. (1MB:DS:C).

Dungeons & Dragons Games

GAM.184: EVERYDAY ADVENTURE - text adventure created with the C Adventure Toolkit; KING - adventure game (SC); UMORIA - Version 5.2.2 of UMoria, a D&D-type game similar to Hack or Rogue. Uses "text graphics." and is very addictive.

GAM.212: HERO II v1.31 - Vastly improved update of this D&D game. Comes with an adventure "The search for the

Stone". Now includes an adventure editor, to create your own adventures and dungeons. (1MB:C).

Games

GAM.187: CHAIN REACTION - Tetris style game - match the colours of any 3 adjacent tiles in either horizontal, vertical, or diagonal directions - order of the tiles may be changed as they descend the screen. Quite good. (C); BOBBLE - Tetris with a twist (C); COLLAPSE v1.0 - very interesting, not-quite-Tetris style game. Blocks of 3 squares of multiple colours fall down - the objective is to get a line of 3 blocks of the same colour in a horizontal, vertical, or diagonal line. More taxing than Tetris! (C); KLATRIX - very good Tetris variant with nice graphics and good gameplay. Eliminate the advancing tiles by lining up the colours of tiles so that they form a line of 3 or more in any direction; TESERAE - Tetris style game - decent music and a moving background to distract you.

GAM.188: BLOCK X - puzzle game - manipulate a collection of blocks so that they match a pattern set by the program. 200 different screens. (C); AERIUS - demo of a fascinating puzzle game. Eliminate blocks of tiles by matching the colour of the tiles to neighbouring tiles. (C); HORROR PUZZLE - Sliding puzzle CPX game on a 7 by 7 grid; NOSCO - another puzzle game. Eliminate blocks, by moving them to other like coloured blocks (C); PIN GAME - simple game similar to solitaire; PUSH BOX - puzzle game - move boxes into safe squares; PUZZEL - sliding puzzle CPX game; SOLITAIR - CPX puzzle game; TAKE TWO - variation of the 'match the tiles game'.

GAM.189: DC SNOWBALL - variation of the ballista-style game. Slog it out in a blizzard using snowballs. A game for 2 players (C); SNO FITE - action-arcade, two-player game (C).

GAM.190: BANG - minefield puzzle game - find where the bombs are hidden, without blowing them up; DEMOL13 - Demolition Man v1.3 - good puzzle game; DROID - shoot 'em up cum puzzle game. Leap around platforms in your droid, shooting at anything that shoots at you and finding keys to doors; ENTOMBED - Rick Dangerous style platform game - run around a tomb avoiding spikes and traps whilst collecting treasure (C); SEEKER - Gold Seeker, a Lode Runner-type game. Allows you to create your own screens - 32 screens (C).

GAM.191: E PRS - game based on the old Paper-Rock-

Scissors game - encourages young children to use the keyboard; BINGO - game; ELICOUNT - Eliemouse What Count's Next Game - counting game for young children; GOLF - patience card game (C); GREED - logic game; HANGMAN - hangman game with a large word list (C); HANGMAN - implementation of the old pencil and paper game: guess the letters of a word before your man gets hanged; HILO - ST Version of the TV program Play Your Cards Right (C).

GAM.192: KENO - gambling game; PATIENCE - card game with card designer; SOLITARE - collection of four card games; SPIDER - variation of solitaire - uses 104 cards in 10 columns; SPIDER SPELL - alternative hangman game - instead of hanging people, this version uses cutesy spiders and insects, etc. Contains a dictionary of 4000 words (C); WORDBID - kids game - bid on letters as the word platform descends (C).

GAM.193: AMMOTRAK - a high speed graphic game where you drive a rocket sled type vehicle. Shoot at targets then drive through them to gain speed and fuel; AIR TO AIR - Aerial combat game between two jet fighter aircraft. Dogfight in the skies. Two player game; BLOCKADE - a game based upon the arcade game 'Qix'; BOING - Use the bouncing ball to collect fruit in this game - difficult to master. (C); BONBON - Two classic games: Breakout and Kubis (a Tetris clone).

GAM.194: D-REZ v1.0 - shareware demo of an Asteroids (Rotating ship, thrust, fire) style game. This unregistered version is playable on only level 1 (C); CYBERNETIX - scrolling shoot 'em up - cross between Defender and Asteroids. Nice graphics (C); DALEKS - strategy game; DECODER - Mastermind game (C); DEEPLAIR - underwater fight with submarines and torpedoes - two player game (C).

GAM.195: DOMINOES - well executed logic game (\$GFA); FOOTBALL - American football simulation - menu driven play and tactics game; FUZBALL - Q-Bert style game - very good with all the elements of the arcade game (C); GAMES - Maze and Push Box: two German games; HOTWHEELS - Race a car around a track - track editor, cars can be tweaked for more or less skidding, and engines can be altered, etc (C); MINOS - maze with auto-finder.

GAM.196: DIABLO v1.0 - sliding puzzle game similar to Pipeman - slide tiles so that a ball always has a path to follow (C); GRIDWAR - Move around a grid avoiding opponents and crossing bonus squares; INVADERS - very difficult shoot

'em up; LIGHT CYCLES - very nice version of this classic game. Race against a maximum of 12 opponents - 6 Human, and 6 computer controlled (C); M BREAK - Master Break. Arkanoid style breakout game - destroy bricks with your bat and ball (C); MASTERMIND - a CPX game of deduction; MAZE - generates mazes; MR DICE - throw your die at the advancing wall of dice, and if the dice match then they are eliminated; MSPACEMAN - great Ms. Pacman clone (C); NOIDS - Breakout (C).

GAM.197: NOVAGAME - great version of the arcade classic Galaxian (C); MUMBO JUMBO - spot the word: OTHELLO v1.01 - Play the computer at othello - try and turn as many of the computer's tiles into your tiles; PANIC - Space Invaders (C); RACKEM - Three games in one: pool, billiards, and snooker (C); REACTION - place atoms on a grid. Too many atoms on a square can cause them to explode, and may cause a chain reaction... A game for up to 6 players; REJECT - hockey type game; REPEAT - a SIMON-like desk accessory game (C); ROBOTER - escape from a maze (M).

GAM.198: ROCKFALL - Boulderdash style game - run around underground caverns trying not to get crushed or trapped by rocks and avoiding nasties; REVENGE OF THE MUTANT CAMELS - Jeff Minters latest shareware offering (C); ROCM - good little shoot-em up game; SLUG - puzzle game that involves sliding blocks to certain places on the screen. The Slug can only move one block at a time (C).

GAM.199: REVERSI - Demo of a Reversi CPX; REVERSI - ACC version of the game; SMASH HIT - excellent tennis game - various levels of difficulty, ranging from 'Easy' to 'Far out man'. Good for practising McEnroe impressions!; SPACEWAR - arcade game; STARTREK - neat version of the Star Trek arcade/strategy (SBAS); WOODLICE - arcade game with screen designer (C).

GAM.200: TURRETS - Shoot 'em up combination of Thrust and Xenon 2; TRAFFIC - smooth pinball game (C); WORD SEARCH Puzzle Generator - excellent utility for generating Word Search puzzles of the type found in 'long train journey' puzzle magazines.

GAM.201: XTRIVIA - trivia game; TRIVIA - game with 20k of questions and answers plus facilities to make up your own; TRIPLES - Concentration clone.

GAM.203: JIGGERS - Shareware puzzle game game from Digital dimension - change tile colours on a 4x4 board. Not

as simple as it sounds because the tiles surrounding the tile being changed will also change colour! (C).

GAM.204: FRUIT PURSUIT - Shareware Fruit Machine simulator. An interesting sim. with lots of features, and sub-games included.

GAM.205: CAESAR v1.1 - Risk style game, played over Europe and North Africa. Played between 6 players (human or computer). Lots of options in game play. Conquer territories, build armies, spy, fortify and negotiate with other Generals (1MB:C).

GAM.206: VIOLENCE - Vertically scrolling shoot 'em up. Collect points and cash so that you can afford to upgrade your ship.

GAM.208: OZONE - platform game that involves running/jumping around, pulling switches, and avoiding enemies. (Not Tos 2.05+).

GAM.210: LIGHT CYCLES - based upon the classic Tron game. Tos 1.4/1.6 only. Uses the STE's DMA sound.

Games Hints and Tips

GAM.202: BARDSTE - allows Bard's Tale to be run from a RAMdisk and fixes the game to run on the STE: EC GIF - GIF pictures of maps for a Lynx game called "Electric Cop": MILLENIUM 2 - Text files from the Millennium 2.2 article published in the Jeremiah's Journal column of ST Applications issue 7: POP2CODE - Cheat guide for Populous 2 - all of the level codes within the game: POP EDIT v2.0 - Populous landscape editor (C): RAILROAD - fix for 4MB machines to play Railroad Tycoon: SCORE - for recording your game high scores: THE ULTIMATE CHEAT GUIDE 2 - collection of 320 game cheats (C): THE CHEAT FILE v2.0 - collection of 153 cheats for games (C).

GAM.207: THE CHEATERS DIGEST v1.3s - A 1st word file with a collection of 100 cheats for various games.

Mono Games

GAM.185: BREAKIT - game of matching pairs of tiles up - limited time to match all the tiles, and some tiles may be blocked: ARKA - Arkanoid clone: BACKGAMMON - On-line backgammon via a modem or against the computer: GETITHR - Get It There - maze breaker game: INVADERS - Space Invaders: MACPAN - Pac Man: MATHMAZE - Move around a mathematical maze by choosing the answer to maths questions. Difficulty of questions can be altered.

GAM.186: MINESWEEPER - find the hidden mines in a minefield. Minefield size can be

as big as 20 by 30 with 150 mines: OPUS 1 - 3D maze shoot-up. Docs and game in German: POKRSQRS - If you like solitaire and you enjoy poker, you'll love Poker Squared: POOL - the game: TETRIS - excellent logic game: ZEST POKER - draw poker, high card, and a one armed bandit.

GAM.211: GNU CHESS v3.15e - a Gem'd version of GNU Chess. Will play any combination of human/computer players. The board pieces can be manually set-up for custom games (SC).

Graphics Utilities, Demos and Animations

GRA.152: PICTURE DISPLAY UTILITIES: DEGSLID - slideshow; GEM SHOW - MetaView - view GEM Metafiles in standard GEM windows: GEM VIEW v1.1d - update of this picture viewing program. Will view GIF, SUN, PAC, IFF, BMP (MS Windows and OS/2 bitmap), RLE, ART, Degas PI[C]I[23], Tiny TI[123], DOO, SPU, SPC, XBM, Bit Map XBM, and Macpaint MAC. Works as a PRG and ACC, and all three ST resolutions: GIF VIEW - GIFcolor and GIFscale: Two Very Fast GIF Viewers: IMG PRINT - Displays IMG picture files: MGIF v 3.7 - GIF picture viewer for monochrome monitors - loads a variety of GIF picture sizes (memory permitting) and display them on a 640x400 mono monitor: RLSGD v0.9 - Displays multiples of NEO and Degas pictures on screen at the same time: SHOWTRIX - slideshow program for NEO, PI1, PC1, and IFF pictures.

GRA.154: TRIP-A-TRON - a shareware release of this light synthesiser program. Lots of colourful effects can be created, that ripple with colour. Documentation is limited, although a full manual is available to registered users.

GRA.155: PHOTOCROME v3.00 - an excellent picture viewer. Can display 24-bit colour pictures in 32768 colours on an STE. and 4096 colours on an ST. Picture quality is remarkable, especially on the STE. 1 Megabyte memory required. Supports IFF, GIF, Vidi ST RGB pictures, RAW and TGA. PHOTOCROME v2.03 - same as above, but will only handle RAW, IFF and RGB files, and only requires 1MB of memory. This disk includes sample pictures, and example QRT files for use with the QRT, ST raytracer. Additional utilities include program to convert from GIF to RAW, and REAL 3D to RAW.

Misc Text & Info

INF.57: MAASTRICHT - text of the latest addition to the Treaty on European Union signed at Maastricht on the 7th February 1992.

Commercial MIDI Demos

DEM.88: 1ST TRACK - MIDI sequence demo from Geerdies. All features operational, but the demo is limited to 10 minutes use: MUSIC TUTOR v2.0 - demo of this program that helps the user practice sight-reading music - checks performance showing any notes that are being missed, played out of time, or if notes were incorrect. Includes an editor for creating pieces of music. Requires a MIDI keyboard for effective use. Fully GEMmed interface - much improved over v1.3!

DEM.89: CONCERTO - demo of a MIDI sequencer from Microdeal. Features a score editor, drum machine, grid editor, step editor, and event editor (C): MIDI DEMO - Demo of a Midi utility - numerous options for Midi users, including features such as replacing Pitch bend control parameters with volume change parameters. Midi macros can also be created. Demo limited to 2 minutes, with no save: MIDI SPY - demo version of CodeHead's MIDI Spy recorder - records and plays in the background. Docs, songs, and press release included: NEW BULK v4.11 - MIDI bulk syssex handler demo, for Roland D5, D10, D20, D50, D70, D110, U20/220, MT32, RSP550, SE50, JV80, JD800: Korg M1/M1R, T1/T3, M3R, Wavestation: DX7/TX7, K1/K1M. French program and documentation. Limited to 20 minutes running time. Save disabled: TX81 ZIP - simple desk accessory that allows you to load and send a patch or bank of patches without exiting your sequencer program.

DEM.90: EZ SCORE PLUS v1.01 - professional composing, scoring, and printing program - allows up to three staves, in four score formats, over 140 symbols: notes, rests, accidentals, clefs, rehearsal marks, bar lines, dynamics, ornaments, articulations, repeat sigh, bowing, etc: VZ START - Casio VZ synth editor demo. MIDI output and save are disabled.

Midi

DEM.70: ESONIQ VFX - Editor and librarian - very comprehensive librarian and patch editor for the Ensoniq VFX synth (with operating system better than v2.0) (1MB:M).

DEM.71: KWAI K1 SYNTH EDITOR v2.2 - bank manager and editor: SPECTRA v1.0 - patch editor and librarian for the Kwai KC10 Spectra synthesiser. All documentation in German/Dutch. Can deal with syssex data.

DEM.72: 16 TRACK MIDI SEQUENCER - Does the usual sequencer stuff (record, play etc) and most commands can be accessed while the sequencer is running. Other features include Quantization, transposition of MIDI channels, and a music arranger. Loads and saves as MIDI files, although syssex events are ignored (M): 1ST NOTE v2.0 - music scoring program for

mono monitors. German docs. Can play score via MIDI: CHKMIDI - Test your MIDI cables quickly and easily: INCONTROL - MIDI manager. General purpose control panel for Midi - can be set-up to control volumes of MIDI instruments, pitch bends, patch selection, or even be set up as a basic synth editor. Works as a PRG or ACC: INTERNOTE v1.1 - music composition tool for use with Midi instruments. Create a musical score, using standard musical notation, which can then be played by a Midi instrument: LOCAL - allows access to the 'local off' mode of a MIDI keyboard: MIDI MAPS - for Cubase: MIDI SWITCH UTILITY v1.0 - for patching MIDI channels so that the pitchbends and volume levels of the channels can be changed: MIDIKBRD - MIDI desk accessory that displays a keyboard on the screen. When a key is pressed on the MIDI keyboard, the "key" on the screen lights up: MIDITALK - talk to any MIDI synthesizer via the ST keyboard.

DEM.73: VZ DUMP v2.0 - Handles bulk MIDI data from Casio VZ synthesizers: VZ EDITOR LIBRARIAN - for use with the Casio VZ1, VZ10 and HS2 synthesizers (M).

DEM.74: A880 v2.3 - editor for Roland A880 MIDI Patchbay with v1.3 of the A880's operating system (M): D-BUD - desk accessory that allows you to edit and save setups for the multi-timbral mode of the Roland D-5/10 series synths whilst within a sequencer program: LEXLAX 01 - easy to use editor for the Lexicon LXP-1, ACC and PRG: LEXLAX 05 - easy to use editor for the Lexicon LXP-5, ACC and PRG: MIDI STROBE v1.3 - fun little program to strobe monitor colours from a MIDI keyboard: MMR - utility for midi printout, filter and channel controller functions: PANIC - desk accessory that sends an 'all notes off' signal to all MIDI equipment: ST STUDIO v3.0 - Bulk syssex dump program. No docs. Handles a wide variety of synths, including Yamaha, Korg, Roland, etc: STMIDIEX v1.63 - MIDIEX SYSEX librarian - allows the exchange of SYSEX files that are stored in the MIDIEX format: VOICESEL - Desk accessory that lets you send program change requests from the ST to any MIDI synthesizer.

DEM.76: MIDI song files in MID format: RAGS - kansas, kyrene, mapleleaf, sycamore, entertain, opheilia, entertain, froglegs, jezabel, chrysant, palmleaf, peach, pineapple, moonshin, snowball: FIDDLE - broom, plowboy, shefield, waterloo, boney, inchquin, may moon, pullets, rogue, whistler, FOLK - dannyboy, gedanken, helston, millers, mutter, TRADITIONAL - basel, backhome, britain, down by, jamaica, orangbl, tell it, america, country2, daniel, liberty, starspan, OTHERS - carousel, cantina, kingo rd, liberty, muskrat.

DEM.77: MIDI song files in MID format: BACH - air, fuge, toc fuge, branden, BEETHOVEN - bffith, eroica, forelise, pastoral, pathetic, BYRD - callino, rowland.

CHOPIN - etude25, imptu1, imptu2, imptu3, imptu4, presto, HAENDEL - adagio, allegro, bourree, menuet1, menuet2, sonate, MOZART - menuetto, romane, rondo, allegro, requiem, OTHERS - bumblebee, cancan, canon, canon2, castle, dandieu, d_sacree, gloria, purcell, sonatina, bolero, TCHAIKOVSKY - ballet, nutcrkr, over1812.

Commercial Music Package Demos

MUS.94: PRO TRACKER ST v1.3 - demo version of a sound tracker player and composer. Compatible with ST/STE/Mega STE and TT. Some options are disabled (save). Includes demo sound tracker modules.

Music Utilities

MUS.91: MUSIC - musical accessory: EDYNTH v1.2 - creates music on the ST using the Yamaha chip: MUSIC WRITER - composition tool - create music on staves and play back via the STs sound chip: SOUND COMPUTER - utility for experimenting with the creation of XBIOS sounds: SOUNDCON - sound generator (SC).

MUS.92: DISCPLAY - Disc Player - replays ST-Replay .SPL sound files of up to 910K on a 520 ST: BINARIS 2 - soundtracker MOD file player: DC DMA SOUND PLAYER - plays DMA sound samples as a background task (STE/TT): MODCATLG - keep track of music MOD files: MODPLAY - Plays stereo soundtracker modules on STE only: NEWBELL - replaces the system bell with sampled sounds: SAMCOMP - sampled sound compressing program: SAMCONV - sampled sound conversion program: SAMPL v2.3 - Sample editor and replay: SCONVERT - Compresses, expands, and converts digital sound samples. Converts between ST Replay Versions 1 to 4. Replay Professional (8 bit). Master Sound and STOS Maestro: SND PLAY - desk accessory to play digitised sound samples from the desktop: STARWARS - Soundtracker module and player: SYSBEEP - replaces the system bell 'sound' with a sound sample.

MUS.95: EMPIRE NOISE TRACKER v1.5 - edits and replays soundtracker modules.

Programming Languages and Utilities

LAN.128: FORTRAN - Full FORTRAN 77 package with compiler, linker, runtime and math libraries, and manuals: XLISP v2.1 - Excellent Lisp interpreter. Includes a collection of subroutines, and documentation.

LAN.129: A68 - 68000 assembler: ASSEM - two-pass assembler, disassembler, editor, and debugger. English translation: CCMOD - Modified versions of the Sozobon C driver program: DISSASSEM - Disassembler and Re-assembler from Yugoslavia - plus Turbo C source code: RES68K - disassembler for 68000/010/020 machine code into assembly language: TBI68K - Tiny Basic.

LAN.132: PROGRAMMING UTILITIES: GFA: 68KTOGFA - fast and powerful utility for converting assembled machine code routines into the GFA Basic equivalent. Saves the result as a .LST file for merging into GFA Basic listings: COLOUR ZEST - colour version of the Zest user interface which is based on the NeXT computer interfaces. Compatible with GFA Basic v2. Sample listings included: CUSTOM GFA - change New and Quit default buttons in GFA Basic to OK: GFA HELP - desk accessory that displays the syntax of GFA Basic 3 commands. Can be edited and so could be adapted to other languages: GFA SPEC - enables Spectrum 512 pictures to be displayed from within GFA Basic programs: MENUMAKE v2.2 - creates GEM menu bars for GFA basic v2 and v3. OTHERS: BYACC - Berkeley Yacc is an LALR(1) parser generator compatible with the AT&T Yacc input specification (SC): DATA STATEMENT KIT v0.2 - converts executable programs into a set of data statements for inclusion into GFA Basic or an assembler. Useful for including programs within others: DATA2BAS - allows you to include data files in your basic programs. Written for HiSoft Basic, but should work with any other if you make a few minor changes: FLEX - Fast LEXical scanner - replacement for the UNIX Lex(1) tool: MMM - Miki Mouse Monitor. For monitoring and debugging of programs.

LAN.135: RESOURCE FILES AND MOUSE UTILITIES: CONVERT - allows K-Resource to produce Include files for DevpacST: CRSRC - system for eliminating resource files from programs developed in Lattice C v5: DEF MOUSE - creates mouse pointers for use in GFA Basic programs: DES MICE - mouse editor for creating customised pointers: EDIT RSC - Resource Editor - allows objects to appear selected or deselected: FORM - utility for creating form alerts: MEDIT - creates data for customised mouse pointers for use in GEM applications: MOSTHIEF - program for stealing the mouse forms drawn by other programs: P RSC - disassembles RSC files to C code (SC): RCS ICN MAKER - make ICN pictures from Degas pics: RESOURCE TO C v1.2 - Converts RSC files into C source code: RSC-VIEW - view RSC file elements (SC): RSTOC - converts RSC files into C source code, to that RSC files can be included within programs (SC): WERCSGFA - converts WERCS constant definition files into a form suitable for merging into a GFA program.

LAN.136: LPR MODULA-2 v1.4 - English translation of disk

PDC.25. Only the manual has been translated, the program menus are still in German. The docs give a translation of the menus.

Printer Utilities

PTR.16: HP PRINTER UTILITIES: BOOKER - prints ASCII files four to a page in booklet format: DESKJET 500 DRIVERS - two printer drivers for use with the Opus spreadsheet: DJ BOTH SIDES v1.6 - aids printing of documents on both sides of the page with a HP Deskjet: FPPRINT - Auto folder program that dramatically increases the printing speed of laser, Deskjet and bubblejet printers: HP ACCS - collection of utilities including a screen dumper and NEC P6 emulator: HP2WWDRV - WordWriter ST printer driver for the HP LaserJet II: HPDESK - HP-Deskjet 500 printer utility - supports horizontal and vertical printing, ASCII text or graphics printouts, and more: HPDJPTCH - patch for HP Deskjet Calamus printer driver: JETON - kick-starts your Deskjet if you forget to turn it on before your ST: MINIPRINT v1.2c - Printout utility for the HP DeskJet - 2 column printing, line numbering, headers, and user definable tab settings: OUTBURST - Demo of OutBurst - a program that reduces the time it takes PageStream to output to HP LaserJet and Deskjet printers. From the author of FPPRINT: PRHP - Text file printer for HP Deskjet and Deskjet Plus - prints files in landscape or portrait.

PTR.18: PRINT OUT UTILITIES: 2COL103 v1.03 - will print text files into 2 columns and save lots of paper: DC v2.20 - Dual Col - prints text files into 2 columns: DISK2PRN - copies disk files to printer - including control codes etc (SC): DM BANNER - prints banners: DUMP - prints any file as hexadecimal to either screen or printer: LIST 66 - Text file printer written in Fortran 66. (SFOR66): MANUAL MAKER v2.0 - Makes printouts of ASCII text using GDOS fonts. Requires GDOS, GDOS fonts, and drivers: MORE - multi purpose file printout utility: MORECOPY - enables users of 1stWord, or most other utilities, to produce multiple copies of a single document without having to repeatedly go through the print routine (SC): MYPR - ST version of the UNIX pr program for formatting files for printing: PAGE+ - Sends files to the printer - designed as a simple way of printing out Basic or Assembler source code - can include line numbers and emphasised comments: PRINT FILE - enables a file to be sent to the printer in a similar way to the Desktop's 'Print' option, where options and parameters such as: Header, Line numbering, Tab settings, and Number of copies can be set: PRINT IT - text file printing utility. Can specify paper size, page format, numbered pages, and print style: PRTUTILS - printer spooler that can also set condensed face, and send a form feed to the printer: TEXT DUMP2 - ASCII file printer that will print batches of

files: TRANDUMP - print a file in HEX.

PTR.19: GENERAL: DC ASCII Dump v1.0 - prints the text seen on the screen to either a printer or a file while in either TOS or GEM mode: DUMP - Dumps text only to the printer as a means of speeding-up screen dumps. Will not print graphics data: PRINT - print ascii files as formatted text: PRINT SC - utility for quick screen dumps: QUICKPRINT - Gives a text only screen dump from an Alt-Help key press: RW PRINT - Reserved Word Printer - puts reserved words into bold (or any other desired text effect) when source code listings are printed: STRIP IT - will show and print any 1st Word document: XPRINT - prints files to printer complete with file pathname at the top of each page (SC): NEC: FX EMU - Epson FX emulator for NEC P6/P7 printers: NEC P2200 - very well implemented printer driver: CANON BJ: 1ST WORD printer driver for BJ10e: BJ CHROME v1.1 - prints NEOchrome and Degas low res pictures to the Canon BJ-10. Requires a sheet feeder and a colour kit: HP: 1ST WORD printer drivers for HP Deskjet/500/plus: HP CHROME v1.1 - prints NEOchrome and Degas low res pictures to the HP Deskjet 500C/550C, and also to the 500 and Plus that have been fitted with colour kits: SCR DUMP - Alt-help screen dumps for the HP Deskjet.

Home & Business Utilities

UTI.288: BRAIDNESS CROSSWORD DESIGNER AND SOLVER v2.30 - Creates crosswords and solves anagrams: CROSSWORD EDITOR v2.0 - Helps crossword puzzle generation and can be used to help solve crosswords.

UTI.289: GARDENER - gardening database. Stores information about plants, and their position in the garden, along with map of the garden layout. Example garden layout included.

UTI.290: INVOICE MASTER v1.11a - generates invoices from a database of customers. Allows old invoices to be recalled, and edited: ON SCHEDULE v3.1 - Aids the creation of shifts. Can schedule up to 5 employees, calculate hours, and print calendars for shifts: PORTFOLIO - monitors the performance of unit trusts, stock, shares, etc. Graphically displays the history, total value, and annual growth rate: RAPSHEET - The Rapsheet time logging program - keep track of time spent on various tasks: STUDENT PLAN - create timetables - for students, and others - translated from PDB.81 (M): TIME SHEET - handles the daily transactions for a recording studio, or any other businesses that charge an hourly rate, and sells some goods. Calculates transactions, tracks balances and inventory: prints receipts, custom forms, and a variety of reports. Includes calendar and address book.

UTI.302: ASTRO v2.2 - Calculates planetary positions, cusps, and zodiac. Add-on modules can be bought from the author (M).

UTI.303: 1ST STEP - Biorhythms and Calendars program (M): ASTROLOGY - comprehensive sinastria and astrology package - display and print houses and aspects for birth dates: BIO RHYTHM - CPX that generates biorhythm charts. Can store a set of preset birth dates: BIOCHART - Biorhythm chart plotter (SGFA): BIOGRAMS - Biorhythms - stores up to 9 different birth dates, which can be instantly recalled and plotted. Uses the Zest interface (M): BIORHYTHM - Desk accessory biorhythm display: BIORHYTHM - Plots biorhythm charts: ELIZA - The Computer Psychiatrist.

Utilities and Applications

UTI.217: CALCULATORS: BICALC - calculator that converts to and from Hex: CALC - desktop calculator accessory: COLA CALC - full-featured programmer's calculator - all the standard operators, bit manipulation, word size and base (binary, octal, decimal, or hex): CONV32C - Desk accessory that converts decimal, octal and hex numbers to 32 bit binary numbers: EASYCALC - colourfull calculator (C): FB BNS09 - Basic Natural Science version of the Fleabyte calculator desk accessory: FLEABYT3 - Three new versions of Fleabyte calculation accessories. FleabyteFFS is a full function scientific calculator: FleabyteSF is like FFS only with support for significant digits; and FleabyteSX is a "standard" calculator. All three can export their calculations into window-based GEM programs (SGFA): HPLIKE2 - Reverse Polish Notation calculator. Features the usual scientific functions: PROCALC - calculator similar to the one in the STBook. Supports Scientific, Binary, Octal, Decimal, Hexadecimal and Time (H:M:S) calculations: STCALC - Simple calculator: TI59 - very powerful calculator with memories, stats and trig functions and printer output: TN PCALC - Take Note Printing Programmers' Calculator - flexible ACC/PRG calculator with printer output.

UTI.220: CLOCKS: Analogue Clocks: CLOCK - analogue clock accessory: CLOCK - nice little analog clock desk accessory (SC): KALKLOCK - PRG/ACC with analogue clock and perpetual calendar. CLOCK SETTERS: AUTOTIME - Date and time setting program that works from auto folder: AUTOTIME - set time/date: BICLOCK - neat time and date setting utility: BOOTUP - set time, date and resolution on boot up (SASM): CLOCK SYNC v1.6 - initialises both the Gemdos and XBIOS clocks: CLOCKSET - version 1.3 of CodeHead's ClockSetter lets you set the system time and date: MONO ACC v1.0 - screen inverter, mouse accelerator, and clock setting

desk accessory (M): SET DATE - set time and date: SET DATE/TIME v1.00 - date and time setting program: SETCLOCK - very good 1K clock setting utility (SASM): SMART DATE - set the system date and time when the CTRL-ALT keys are held down at boot-up: ST INIT - Boot-up prog to set the floppy boot drive (A or B), and set the date and time: STD - Set time and date. Acc and Prg: TIMEDATE - set system time and date. Digital Clocks: AREAL CLOCK - very flexible on screen clock accessory: CLOCK - digital desktop clock (SASM): DATETIME - ACC to display date and time on the desktop. Set at boot up and retain setting across a reset: DCCLK v3.3 - digital clock in the top right corner of the desktop: DCCLOCK - Digital clock: HIRES CLOCK - Digital clock (M:SASM): INFORMER v1.0 - useful desktop utility that can display: date/time, free memory, coordinates of mouse pointer, caps lock status, and disk drive activity. Works as PRG, ACC, or from AUTO folder: J CLOCK - desktop time and caps lock indicator: ST CLOCK - Reads a DESKTOP.INF file and sets up the ST accordingly. (SC): TIMEDRV - displays time, and disk drive access. DALLAS - Fitting instructions and software for using the Smartwatch clock 'card' (from Tandy): MYTIME - set IKBD clock from system clock (SGFA): TIMESAVE - save and restore the system date and time after a reset (SASM).

UTI.235: ALTERNATIVE CONTROL PANELS: C PANEL - replacement control panel with RAM disk: COMBINED - Combined desk accessory with all the features of Atari's standard control panel, plus a ram disk, file manager, and a keyboard symbol editor: DESK SWITCH v1.1 - The Ultimate Read-Only Control Panel By Charles F. Johnson. Lets you instantly switch from one desktop setup to another by reading DESKTOP.INF files: KEYBOARD RSX - sets up keystroke control of: warm and cold boot, screensaver, boot from A/B, invert display, resolution, keyclick, 50/60Hz, verify and show/hide mouse cursor: RESET 484 - Toggles the settings for keyclicks, key repeats and the bell warning sound: ROCP - Read only control panel. Reads the desktop.inf file, and sets the palette, printer, modem port, etc. accordingly. Saves a desk accessory slot and memory: SYSTEM - Control accessory with clock, four alarms and printer set up functions: also version to give IBM style accessory access (M:SPAS:Not TOS1.2).

UTI.253: REPLACEMENT FILE SELECTORS: DEF SEL - replacement file selector: FILE SEL - C source of a solution to the GEM file selector and an example of it in use (SC): FILEFIX - accessory fix for the GEM file selector: FSELECT - Martin Patzel's excellent GEM file selector replacement: LGFSEL v1.8c - Little Green Selector - replacement Item Selector - now compatible with CodeKeys and the TT: SELECTRIC v1.00 - German shareware replacement file selector which features: file copying and moving, folder creation, multiple pathnames.

multiple file extensions, sort items, and drive selectors. There are keyboard shortcuts to most facilities.

UTI.254: KEYBOARD UTILITIES: CAPS STATUS: CAPS - Caps lock indicator desk accessory; CAPS LOCK - displays caps lock state; NOLOCK - disables the Caps Lock key. KEYBOARD MAP: DC BHELP - prints a backspace character whenever the <Help> key is pressed; DC JCHAR - Assigns a keyboard character to any of the eight joystick positions so that the joystick can be used to emulate certain keys on the keyboard; DVORAK - keyboard config; KBTEXT v2.0 - allows installation of ALT and ALT-SHIFT keyboard tables (SASM); KEYEDIT - keyboard editor - will load and save layout files; KEYMAP - Reads the current kbd translate tables and creates C source (SC); KEYTABLE - All chars 128-255, plus XUTI.ACC which includes a keyboard configuration utility; MOBZKEY.ACC - set up alternative keyboard configurations. SHORTCUTS: CAT - (Gets rid of the mouse) - replaces drop down menu items with keyboard commands - does not work with all GEM applications; DC DESKEY v1.0 - Allows the options on the Desktop's menu bar to be selected using the keyboard; DC FKEYS - assigns 49 function key text macros of 40 characters each - a text data file is used for easy user editing; FNKALERT - use the function keys F1, F2 and F3 to select the buttons in GEM alert boxes; FORM DO IT v1.2d - alters the way dialog boxes and alerts behave; Use the keyboard to select buttons in dialogs and alerts. Position the edit cursor anywhere in a field with the mouse. Enter any ASCII character. Re-define the icons used in alert boxes, and more! MASTER KEY - keyboard macro utility with demo and a tutorial. OTHERS: CLICK - switches the keyboard click on and off; DECKEY - instructions and software to connect a DEC LK201 keyboard to an ST; KEYBOARD - article and programme on decoding and using Key-presses (SC); KEYBOARD - set delay and repeat.

UTI.263: COMPARE FILES: CMP FILE - compares two text files and displays any differences. COMPARE - compares two files and displays any differences. DIFF - compares text files; DIFF v3.15 - file comparison program; GNU DIFF v1.14 - differential file comparator. Compares up to 3 files simultaneously.

UTI.264: FILE EDITORS: BED - examine or edit disk sectors, files, or memory; BYTE MECHANIC - disk file editor; CUSTOM - file inspection and editing utility - useful for making English versions of foreign programs (SC); EDIT - Very well implemented file editor - will edit any type of file - text, program, graphic, etc (M); MUTATE - Memory, sector and file editor - edits sectors over 512 bytes (SC); XXED v1.1 - file editor with simultaneous hex and ascii display; ZAP ST v2.14 - File editor. Loads and displays a file, and allows editing in either HEX or ASCII.

UTI.265: FILE UTILITIES: FILE EDITORS: MEMFILE 30 - Disk and memory editor desk accessory; TINY TOOL2 - re-working of this excellent editor - now supports drives C to P and is less prone to crash. FILE FINDERS: DIAMOND FIND v1.0 - A very good file finder utility - easy GEM interface and straight forward to use. ACC and PRG versions; FF v3.1 - File finder - useful program if you have lost a file on a hard disk (SPAS); QUICK FIND - searches for files; STREE - The ST Filetree Scan Utility Version 1.04 - desktop accessory which lets you search for files that match a specification and then manipulate them using a TT style desktop. Search specification includes: File mask with full Unix style wildcarding. Drive partition(s). Path to start on. Depth of folders to search. File attributes. Date/Time stamp range. File size range, and ASCII or hex strings to search for within a file; WHEREIS - finds files on disk; WO - file finder. ATTRIBUTES: ATTRIBS2 - changes the attributes of a file: Read Only flag. Hidden file flag. System file flag. Volume label flag. Subdirectory flag, and Archive flag; BSS BIT - set/reset BSS bit in binary headers; DATEFILE - changes the date and file stamps on files; FBIT - set Fastload bit on executable files; FLEXIFAST - replacement for the Atari 'makefast' program - allows a batch of programs to be changed to/from fast loading (SC); FLGSET - Flag Set (PRG and ACC) - set the flags in the header of an executable file; HIDEFILE - reverses the Hidden File bit of any file (SC); MAKEFAST - set the Fastload bit on programs so that they load faster with TOS 1.4+; NEWTOUCH - updates file dates; PRGFLAGS - a utility from Atari to set flags in program headers; SATTRIB - a short file attribute modifier which can be used to hide or protect files; UN HIDER - shows hidden files.

UTI.266: FILE UTILITIES: DC GTP v1.0 - GEM Takes Parameters. Allows TOS versions below 2.xx to run GTP applications; FINDER10 - Finder v1.0 File Finder - simple utility that helps locate a file that contains a particular combination of words or phrases; GIZZMO - ACC to enable creation of folders whilst within GEM applications; GTP - allows TOS 1.xx to pass parameters to a GEM program with a GTP extension; HDSCAN v1.6 - hard disk organiser - excellent for finding "lost" files (SUNIX C); MEGA RIPPER - utility for examining files and extracting pictures and music; QUICKSORT - sorts text files alphabetically; RE-NAME-IT! - a program that renames files, folders, and volume labels, using upper case, lower case, and extended characters; SORT v0.30 - file conversion utility - useful for converting ASCII files, and database files; THE ACCESSORY - multi purpose ACC: prints directories, create/delete folders, format disks, set preferences, and copy files; UN BAKUP - globally deletes all .BAK files; UNDOUBLE - Removes subsequent repeated lines of text in a text file; WHAT IS IT v5.8 - Very useful utility that identifies file-types: LH1 or LH5, TXT, ARC, etc.

UTI.267: FILE UTILITIES: OTHER UTILITIES: AUTOFIX - allows some "AUTO" programs to be run from the desktop as TOS files. (1MB); BINHEX - translates binary files (PRG, TOS, etc) to/from hex format - useful for transmitting without a binary protocol, or easy editing of the text in programs; FILETOOL - a file manipulation accessory and replacement file selector based on a double file selector with both source and destination selectors displayed. FILE RECOVERY: DC SALVAGE - attempts to rescue any file from a damaged disk; DISKFIX2 - Recover files from damaged disks; DISKREAD - Excellent utility for recovering text files from badly damaged disks - even works if the FATS have been lost (SC); FIX-DISK - Check disk and (attempt to) repair damaged sectors, re-format without erase, salvage from damaged disk; READSECT - Recovers disk contents by copying selected sectors to a file; RECOVER - aids recovery of files by examining sectors; SEC SAVE - text file recovery program - aids recovery of accidentally deleted files; UNDELETE - Recovers deleted programs and files (C); DESTROY FILES: BLANK - fast disk erase - blanks the FAT; DELETE - deletes batches of files; FILE KILL v1.20 - completely deletes files by overwriting the sectors that the file occupied with random numbers - making the file unrecoverable; LSTDEL - GEM version 3' delete; PFDU - Permanent File Destruction Utility - completely removes a file from disk; SAFE KILL - fully delete files so that they cannot be recovered; SCRUB - permanently removes files from disks; SHREDR2 - file deletion utility - shreds' files. DIRECTORY UTILITIES: AUTOSORT - Quick and efficient way of changing the order that files will be executed in your AUTO folder; DIRSORT - Utility to sort files within a folder; DIRSORT V1.0 - sorts the order of files within any directory - especially useful for AUTO folders.

UTI.268: TEXT FILE VIEWERS: EASY VIEW - text file viewer; FILE LISTER - lists any file to screen/printer, with various options for print-out format, and line numbers; FILSPY v1.2 - File Spy - excellent replacement for the GEM Show function; MAN - prints pages of an on-line manual system; FERUSER - text file viewer that will also allow pictures and music to be incorporated into files; QVIEW v1.45 - Text file viewer; SPEEDWRITER - word processor with "musical" playback (SGFA); THE GURU v1.01 - desk accessory hypertext program. Imports a specially formatted ascii file, which can then be used, in hypertext fashion. The hypertext documents are easily created, using a text editor/word processor; TURBO QZ FILE VIEW v1c - file viewer that replaces the desktop show/print/cancel routine. Files may be scrolled using the mouse; VIEW - text file viewer.

UTI.270: MEMORY UTILITIES: CRASH - Displays the system registers after the ST has 'bombed'; DC RESERVE - saves a predefined amount of

memory when you execute a program; DC Show Hex v1.0 - lets you view and search data in a file or system memory; FFU - Tests effectiveness of MC68820 maths co-processor; FPU TEST - checks whether a MC68881 math co-processor is installed; FREEMEM - Displays amount of free RAM; FREE RAM - Displays the amount of free RAM; INFORMER v1.0 - A useful desktop utility that can display either the date and time, amount of free memory or coordinates of mouse pointer. Can also display caps lock status, and disk drive activity, indicating which drive/partition is being accessed. Can be installed as either a PRG or ACC, and can also be used in AUTO folder; JAR v1.2 - lists contents of Cookie Jar; LEONARD - replacement for the Atari bombs - replaces them with "Leonards"; MAP MEM - Displays memory usage; MEM25STE - allows 1MB SIMMS to be mixed with 256KB SIMMS in an STE; MEMORY - Freemem - Reports total memory (RAM), free memory, and used memory; MEMORY SET - Set the amount of memory that the ST thinks it has, from 512K to 4MB, in 0.5MB increments; P M D U M P - displays Postmortem information as the result of an exception (bombs!); PRIVATE EYE - displays internal parameters; SIMM FIX - allows SIMMS to be mixed in an STE; STATS - The Statistician - reports STs memory allocation, disk usage and general system parameters; SWITCH - splits an ST into two independent machines; SYSMAP - Displays system free memory and drive free space from all attached drives; SYSMON v0.91 - intercepts all calls done through the CPU's trap vectors and displays information - for debugging programs for which no source is available; SYSMON v1.03 - Monitors system calls, and dumps the information to memory/screen/printer/file.

UTI.271: MEMORY UTILITIES: MEMORY EDITORS: BED - examine or edit either disk sectors, files, or memory; MEMFILE 30 - Disk and memory editor desk accessory; MUTATE - Memory, sector and file editor - edits sectors over 512 bytes (SC); TINY TOOL2 - re-working of this excellent editor - now supports drives C to P and is less prone to crash; LMEMTEST - simple memory tester for checking that data isn't being corrupted within memory; MEMTEST - memory tester (SC); MEMTEST - memory tester; MEMTEST - RAM testing program that produces hard copy reports of a run - to a file, or direct to a printer (SC); RAM TEST - Comprehensive RAM testing software; FREE RAM - displays amount of free memory; MAKE MEM - sets the amount of memory that the ST thinks it has to either 1MB or 0.5MB; MUSHROOM COUNT - post mortem analyser; TOPDOWN LOADER v2.7 - Installs AUTO programs at the top of the ST's memory, instead of the bottom. Makes boot-ups faster, and allows programs like Zoomracks to be used with AUTO programs, and desk accessories. TOS CEH - TOS-Critical Error Handler v1.2; TWOMEG - Allows SIMM cards of different types to be

mixed when using an STE (SASM); U.C.F RAM ACCESSORY - Displays free ram.

UTI.275: RAM DISKS: EDISK v2.1 - re-sizeable, reset proof ram disk; ERAMXXX - reset proof ram disk - reads set-up data from its filename; ETERNAL - ram disk that survives a reset; ETERNAL3 - source code for an eternal ram disk (SASM); FASTRAMD - fast ram disk; HRAMDISK v1.1 - HybirdSwitch ram disk - reset proof and can be installed at boot-up; INTERSECT - desk accessory ram disk; L-UTILS - permanent RAM disk and disk cache (will share with K-Switch); MAXIDISK - ram disk that compresses data - so that around 750k of data can be stored within a 500k ramdisk - can have files automatically copied to it at boot-up; RAMBABY - new faster version of the Intersect RAM disk and printer spooler accessory; RAMBUFFER - very good ram disk and printer buffer accessory; RAMDISK - Desk accessory Ramdisk; RAMPLUS v1.22 - Ramdisk and printer spooler which incorporates a mouse doubler and verify toggle; RDESH v2 - form of Mark Williams Co.'s "RDY" Ramdisk; Reset survivable, configurable and saveable ramdisk. The whole contents of the ramdisk can be saved as one file; RDU - new faster version of the ERAM RAM disk; TORAM - auto copies files to RAM disk at boot: TURBO705 - Turbo Reset Safe RAMdisk and Printer Buffer; VDISK - Desk accessory Ramdisk. The ramdisk is memory resident, reset proof, and auto bootable. Whole RAMdisc contents can be quickly saved to and loaded from floppy/hard disks (Translated from German).

UTI.276: SHELLS: BEST-SHEL - shell utility - limited to 5 menu's - quite enough for many applications; EASYGO10 - program launcher that automatically maintains separate program menus for each graphics mode. Easy to use mouse controls. Simple editing functions for clearing, renaming, or moving menu items; GOGO ST v2.3 - a fast way of executing files: instead of searching through folders for executable files. Ideal for use with hard drives; MENUMAKE - Create a menu directory for launching any program from a single menu folder; QMEN v2.5 - A much improved version of QMEN - allows passwords for access to certain files; QUICK RUN - shell for up to 20 programs; SEL PROG - searches disk for executable programs - so that they can be selected from a menu; ST WHIZ v2.0 - utility to display executable files, and execute them from a menu. Inspired by Gogo ST; ZAPENU - another replacement for launching programs from the desktop.

UTI.277: SUPERBOOT v7.4 - very good boot-up utility - allows a choice of desktop ACCcessories. AUTO programs, Desktop.inf files, assign.sys files, and 'Other' files at boot up. Plus: a welcome screen, set date and time, restricted access to hard drives, and up to 30 pre-set configurations. New features include support for auto booting GEM

programs with Headstart, Startgem, or TOS 1.4+, and TT compatibility. This version will play digitised sounds, function key settings can be altered from within the Superboot start-up screen, and force date and/or time entry for a function key:

UTI.282: SCREEN UTILITIES: 50-60 Hz - switch to 60Hz: 50-60 Hz - Screen frequency changer: 50-60-50 - Toggles the scan rate for monitors between 50Hz (U.K) and 60Hz (USA standard) (SASM): 60 Hz - switch screen refresh to 60Hz: BIGSCRN v1.1 - Creates a virtual screen image larger than the physical screen size (Not TOS1.0): BOINK - two fancy animated screen savers for colour monitors: CHANGEHZ - Toggles screen frequency between 50 and 60 Hz. (C): DOUBLE2 - Double Screen Height emulator for STE and Mega STE - Version 2 of this super-smooth large-screen emulator: EDISON - Mouse accelerator and screen saver desk accessory. Nicely animated screen saver: HOT SAVER v1.1 - entertaining and flexible screen saver: IDLE v1.2 - Nite/Night screen saver replacement: MONSTER v0.3 - Large virtual screen for TOS 1.4/1.6: PYRO - Displays animated fireworks when saving the screen: RESYNC - Desk accessory and Auto program to toggle between 50 and 60Hz. (C): RUBRICKS - novelty screen saver. When activated, the screen is split into 'tiles', which are then shuffled around like a

sliding puzzle: SCREENPR - desk accessory screen protector: SCRNOFF - blanks screen after 5 minutes of inactivity: SCRSAVER - desk accessory screen saver - activates after 5 minutes of inactivity: SIXTY HZ - set screen refresh rate to 60Hz (SASM): SOFT SCI SAVER - Screen saver that displays a slowly moving sprite on screen. A variety of IMG files can be used for the sprites and a demonstration editor is included: STARSOLVE v0.50 - a screen saver program which displays a starfield background. Speed of stars and timeout can be adjusted: STARSTRK - fancy screen saver (Not TOS1.6):

Label Makers

UTI.273: DELTA X v2.6 - Label printer with lots of options to create interesting labels for your disks - new graphics can be imported from Degas hi-res pictures (M): DISK LAB v2.0 - Disk label printing program that prints on to 2.75" x 2.75" labels. For Epson compatible printers: DISKLABEL - Prints out labels of a disk directory: DKLABEL - The Disk Labeler - reads file names on a disk and prints them on a label: EZLABELS - Prints 3.5" labels: GEMLABEL - an all purpose labelling program, suitable for address labels, audio and video cassettes, floppy disk, index cards and rolodex cards: GEMVLP26 - working demo of GEMvelope version 2.6 - A

feature packed envelope printing package: LABEL EXPERT - excellent label making program - includes pre-set formats for floppy disk, cassette, Video, and file labels. German program but all actions are pretty obvious (M): LABEL25 - configurable label maker.

UTI.274: JC LABEL v1.1d - label printing program suitable for address labels. A database of labels can be stored by the program: LABEL - Produces very nice disk labels with plenty of graphics (M): LAB E L PRINTER v1.2b - prints labels to Epson compatible printers. Includes a database that will store up to 200 labels. Label size is selectable (M): LABELS - Creates and prints many different label sizes in lots of different print styles - includes printer set up utility (SPAS): LABMKR - Label Maker with nice graphics: PASTE - prints nice mini address labels (M): QUICK LABEL - label maker: ST LABEL - Produce very nice disk labels with plenty of graphics (M): TAP MAKR - Tapita Maker: makes labels for music cassettes: VIKA - Prints labels for cassettes and Videos.

Science & Maths Utilities

UTI.283: MOLECULE v3.43 - 3D molecular modeler. All options and documentation in

German. Creates Red/Green separated images for viewing with 3D glasses: MOLGRAPH FILES - Molecule files for use with Molgraph - DDT, Nitroglycerine, Phosphorous pentachloride. Cyclonite. Tri chloro ethanal.

UTI.284: PTHERMAL - calculates heat sinks required for transistors: RESISTOR - GFA Basic v3 program. Calculates the value of a resistor from the colours codes (C): SPICE - Electronic circuit simulation program. Analyses non linear DC, non linear transient, and linear AC. Circuits may contain resistors, capacitors, inductors, mutual inductors, independent voltage and current sources, four types of dependent sources, transmission lines, and common semi-conductor devices. The circuits are defined with an ascii file: TONE CONTROL - electronic circuit calculator for calculating component values for a Baxandall tone control circuit. Circuits can be displayed on screen or printed.

UTI.285: CONVERT - Converts between metric and imperial units. ACC and PRG versions (M): CONVERT2 - produces conversion tables - pounds to kilos, etc: DIVIDER - calculate potential dividers for building elect. circuits - tries to specify resistors that you have in stock: GRAVSIM - good gravity simulator shows the effects of two bodies on each other in a universe (SBAS): LEWIS 123 -

Spreadsheet for chemists - covalent bonds plus tutorial on Benzene to get you going - excellent - comprehensive documentation (M): METNET - ACC and PRG versions of a utility to convert between different units of measurement: POWER CONVERTER - Converts between units of power and electrical measurements.

UTI.295: BUFFON - Approximates pie: DIFFER - differentiates f(x). f(x,y) or f(x,y,z) equations: EQUSOLVE - solves linear equations for n=1: KRC - Kent Recursive Calculator. Powerful mathematical calculator which reduces expressions in an equation to a value. Calculations are preformed using script files that contain the sequence of calculations to be performed. (SC): R CALC - Reverse polish number theory calculator.

UTI.296: EINSTEIN - Mathematical function plotter: GODEL - Graph plotting utility from Wooleysoft. Godel is an intelligent mathematics processor which can do arithmetic, solve equations, plot graphs and calculus. This PD version is limited in that the simplifying of expressions is not shown and equations are limited to powers of 1: GRAFPLOT v1.2 - good graph plotter (M): GRAFTOOL - nice graph plotter for long maths functions - with on-line help: GRAPHER - 2D graph plotting program. Will plot in Trigonometric, Polar and Rectangular co-ordinates (SPAS).

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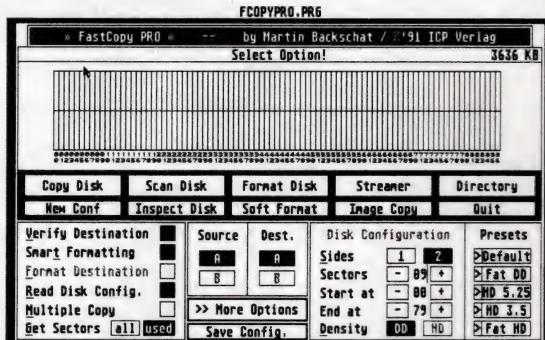
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One of the factors in the success of the ST was its easy-to-use graphic front end: icons can be used to enhance that front end and enable the user to customise a set up. Icons can act as helpful reminders and mnemonics, not to mention their aesthetic impact.

The purpose of this article is to show how to use images from your favourite art program to produce icons, rather than using the awkward editors that accompany some programs. This opens the way for the use of scanned and digitised pictures. It is tempting to raid programs' RSC files for icons but I am unsure of the legal implications of this, and in any case I hope this won't be necessary after you've read this article.

The Practical bit

The most essential tool is Jeremy Hughes' "Imagecopy" (reviewed STA 24). This program (which can be installed as a desktop accessory) has the ability to save images in resource file format (*.RSC). Such files are used by programs and accessories to store their graphic interfaces with the user and contain such items as the drop down/pop up menus, dialogue boxes, icons etc. (Some programs and accessories have their resource files embedded within the executable file or accessory, so no separate .RSC file is apparent.)

It is this resource file format that is used by many replacement Desktops such as Neodesk, Gemini, Newdesk (TOS 2.xx upwards) and DC Desktop for their icons. I am unsure of the requirements of Kaosdesk and Teradesk.

This article is primarily aimed at Neodesk users but much will be of interest to users of these alternative Desktops.

Imagecopy lets you save a part

Easy Neodesk Icons

by Paul Kenny

of a screen image (from most GEM and TOS environments) in Resource file image format. It is simpler to have Imagecopy installed as an accessory for this purpose, especially for use within GEM applications which allow access to the desk accessory menu.

Firstly, Imagecopy must be told that captured images are to be saved in *.RSC format. This is done via the Image Format option. Whilst in this dialogue, it is appropriate to set also the path to which captured images are to be saved. Single floppy users could enter "A:\", which would cause the image to be saved to the root directory of Drive "A" or Hard Disk owners could enter something along the lines of "D:\ARTRSC\IMAGE". Imagecopy helpfully informs you if the image could not be saved (disk write protected or no disk space, for example). You are now ready to start grabbing images.

Imagecopy works in much the same way as Serdump.Tos and Megasnap.ACC, by hijacking the ST's Alternate-Help print screen routine. Of course any program in which the Alt-Help routine has been disabled (most games and some art packages) will be unable to supply images to save.

The most important thing to bear in mind is that icons are generally only 32 x 32 pixels in size. This may seem tiny, but it is surprising just how much detail can be squeezed in. Imagecopy can produce *.RSC images that are anything from 6x6 to 128x128 pixels in size.

My introduction to alternative desktop icons was via the program GemPlus which appeared on "ST Format" Cover Disk 13, but after initial excitement I was put off by the awkward icon editor.

My initial enthusiasm was based purely on their being an amusing alternative to the dull Atari disk drive and trash icons. It was only after being introduced to Neodesk that I discovered their practical use. By way of an example, whilst writing this article over several days, I left its file icon on the Desktop so that after booting up I could just pick it up and drop it onto my 1st Word icon. Neodesk would then run 1st Word and load the document as well.



Icon Sources

Clearly just about any image you can get on screen is a potential source of icons. But it is far easier to use a paint program than the dedicated icon editors that accompany most desktop replacement programs, particularly as the image can be drawn quite large and then shrunk to the appropriate size before grabbing with Imagecopy.

Maybe the best paint program to use as an example is the excellent PD package Public Painter (ST Club disk DRG.19).

The image to be grabbed is first of all imported into Public Painter, which can use "Doodle" (*.DOO) or "*.IMG" formats. If your image is not in one of these formats, (*.PI? or *.NEO for example) then Imagecopy can be used to convert it into an .IMG file.

The image then needs to be sized (if appropriate) and this can easily be performed using Public Painter's block operation. Once "block" has been selected from the

menu, a box can be drawn around the image and either resized manually by dragging the side boxes, or by repeatedly selecting "Half H." and "Half W." from the block drop-down menu.

The aim is to get the image down to 32x32 pixels. Naturally this will not achieve successful results with all images, especially large ones. Some trial and error is required, particularly with digitised images as they can appear to become too dark. However, shrinking them again from the start can give different results and if all else fails, a light fill can be used on the image first.

So how do you know when your image is down to 32x32 pixels? I find the best way is to draw a guide box using the keyboard rather than the mouse. This is done in Public Painter by selecting the box icon and moving the cursor on to the drawing area. The next stage is a little tricky; hold down simultaneously the Alternate, Shift, and Insert keys and tap

the right arrow key 32 times. Without releasing the first 3 keys, tap the down arrow 32 times. Release the keys. You have just drawn a 32x32 pixel box. Save it for further use.

(All of this fiddly business can be avoided if you are lucky enough to own Jeremy Hughes' other excellent offering Fontkit Plus, which I'll come to later.)

By now, your image should be down to approximately 32x32 pixels and you are ready to grab it. Press and hold the Alternate key and depress the Help key. Release the keys. With Imagecopy installed, a pointing hand will have appeared where the cursor once was. If you click and hold the left mouse button and move the cursor, you will see that a box is being drawn. It is into this box that your image should be placed. The box can be drawn anywhere on screen and at any size, as it can later be manipulated with the cursor keys. This is the reason for drawing your little box. (Note: When grabbing images for use as resource files as we are here, the maximum size that the box can be drawn is 128x128 pixels. If you find that the box can be drawn larger than this, then you have not set Imagecopy to grab Resource images.)

The 32x32 box that you saved earlier can be viewed in an adjacent window to your image and the Imagecopy copy grab box can be drawn over it as a guide. Don't worry if you are not spot on first time: as I said above, the box can be manipulated by use of the cursor keys. If you have grabbed an image larger than 32x32, then only the top left of the image will appear when it is imported as an icon, so it is important to get the size right.

Now that you have a 32x32 box, move it over the area to be grabbed as an icon and save it by pressing the Return key and then give it a name. Your resource image has now been saved and is ready to be imported into your Desktop as an icon.

Using Fontkit Plus

The image to be copied can be grabbed in any way - in fact it is better to grab too large an image and then shrink it in Fontkit. The only stipulation is that the image initially grabbed cannot be more than 128x128 pixels. Once the resource file has been saved, it can be imported directly into Fontkit.

The first thing to do is to trim off any unwanted pixels to get the image down to size. This is most easily done by moving the image to the bottom left of the grid using the Move commands.

Now go to the Size menu and look at the size of the image. If it is more than 32x32, then the image will need

to be resized. If, for example, the image size is 48x56, then in order to maintain the aspect ratio of the image the figures to be entered in Resize would be 032/056 on both the width and height fields. If however you wished the image to completely fill the 32x32 pixel grid, you would enter 032/048 in the width field and 032/056 in the height field.

Although your image may be 32x32 the remaining grid, or cell as Fontkit refers to it, may be larger. The extra rows and columns can be removed in Fontkit's Size menu by resizing the cell to 32x32; or if you position your image at the top left of the cell you can leave these extra pixels in - they will be ignored once imported into Neodesk.

Your image will now be 32x32 pixels in size and any necessary touching up can be performed using Fontkit's extensive drawing tools. Don't forget to experiment with the effects options as some quite dramatic effects can be obtained. If you make your image smaller than 32x32 it can be beefed up by adding shadow or shade effects.

Before saving your image to disk, remember to save your edits in the Character menu first, otherwise you'll be saving the original unedited image. Incidentally, a 32x32 ".RSC" image file should be 182 bytes in length.

Importing the Resource image as an icon

If you have been successful in creating a 32x32 pixel resource image the final process is quite simple.

Select Edit Icons from Neodesk's Options menu. After a short pause, the screen will alter to the subtly different icon editor screen. You will observe an icon that appears to be a box with flies buzzing round it (sorry Grinbif!).

Double-clicking here opens a window which contains Neodesk's current complement of icons, and it is into this window that your new icon should be copied.

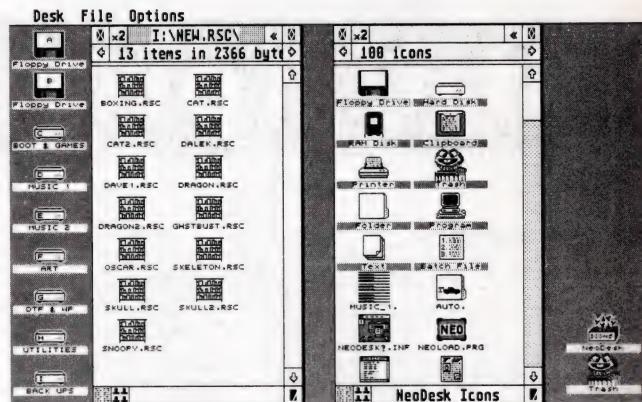
First, open the path to your newly created resource image. Double clicking on the *.RSC file opens a window in which you can observe your icon. You can now see if it was successfully grabbed as a 32x32 pixel image. The most common error to be observed at this point is that the image was too large and has had its right and lower edges cropped. The only thing to do is to try grabbing the image again.

Assuming that your icon has come out as expected, the next stage is to invoke Neodesk's "special icon editor dialogue box". This is accomplished simply by double clicking on your icon. If you have made a good job of

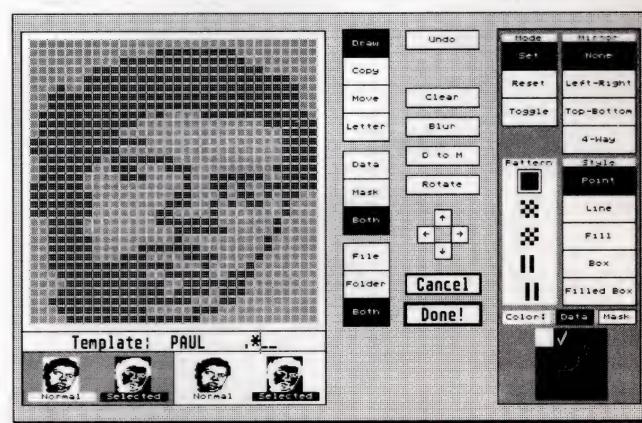
► The image file before being shrunk and 'iconised'.



△ Fontkit Plus with "PAUL.RSC" imported.



△ Neodesk's icon editor screen with window opened.



△ The "Special Icon Editor Dialogue Box".

your icon, the minimum of editing will be required. At the most basic level, you will only have to do two things:

- Name the icon by either giving it a name, or a mask for the file type it is to represent; e.g. "UVK*.PRG" (to cover all version numbers of The Ultimate Virus Killer), "*PI?" for all Degas pictures or "MIKE.IMG" for a specific file.
- Fill in the icon's mask to give it a background on which to sit.

The difference between an icon's data and its mask used to be a great source of confusion for me. It is best to think of the data as the image that you have created and the mask as the "paper" onto which it is to be drawn. If you wish to create sophisticated masks, bear in mind that the data can be copied to the mask in the icon editor and new data can then be pasted on top of the mask by dropping one icon on top of another. So you can use this whole process on masks as well as data. For my own part, 99% of the time, I just fill the mask entirely to give the image a square piece of "paper".

Whilst in the editor dialogue box, you can touch up or move your image as you wish but

remember to keep an eye out for which options are selected as it can be quite easy to put a foot wrong. Fortunately there is an Undo function. When you have finished with the editor, you now need to import your icon into Neodesk. This is simply a matter of exiting the editor and dragging the icon into the Neodesk icons window.

Ordering Icons

There is one more process before your icon can be said to be in place and that is to set the order in which it appears with respect to Neodesk's other active icons. The icons have a pecking order so that some take precedence over others. If you fully open the Neodesk icon window you will see its current order, reading as it does from left to right and top to bottom.

The reason for this precedence is that icon names can clash when using wildcards, for example "MIKE.IMG" and "*IMG" will clash when it comes to identifying the file "MIKE.IMG", as will *PI? and *PI3 when it comes to identifying high resolution Degas images.

In actual fact a clash does not occur, since the icon that appears first in the Neodesk icon window

takes precedence. So you can see the importance of the order. If the icon "*IMG" appeared before "MIKE.IMG" then as the first icon represents all ".IMG" files, the "MIKE.IMG" icon would not get a look in. If however the relative icon order were reversed, then the file "MIKE.IMG" would get its own icon and all other ".IMG" files would get the "*IMG" icon. In general it is a case of moving specific file name icons ahead of any wildcard ones.

Neodesk can perform this automatically for you or you can do it manually. Select Reorder Icons from the Options menu. If you select Manual, icons can be picked up and moved around. Once you have the icons in the desired order, select Reorder Icons again to cancel the process. Select "Return to Neodesk" from the "File" menu and your new icon is saved. If using a floppy only system your Neodesk disk must be in the drive; the new icon is saved as part of Neodesk's own resource file.

If this process seems a little long-winded, it is only because I have gone through it step by step. Once performed a couple of times, it becomes very simple - far simpler

than trying to create a decent icon in the dedicated editor.

Use of ".NIC" files

I have discovered that Neodesk's proprietary format for storing and exchanging icons can cause some confusion. Once you have created some icons you may want to exchange them with friends and this is what .NIC (Neodesk ICon) files are for.

To create a NIC file, enter the icon editor and open a path to which you want the NIC file to be saved to. This seems a bit of a backwards way of doing things, but this is how it is done. Now select Create NIC File from the File menu. Filling in the details is self evident, the most important field being the NIC file's name at the top. Click on OK when finished. You will notice that the NIC file already contains some icons. These are Neodesk's default icons and are always present to allow Neodesk to display the drive, trash icons, etc.

New icons are stored in the NIC file in the same way as they are imported into Neodesk above. To view the contents of a NIC file just double click on its icon and use the scroll bars as necessary.

Multiprint

multiprint

Record Size: 0 Kbytes

Load Save

Buffer Size: 300_ Kbytes

Buffer Compress: OFF

Preferences

Replay Copies: 1 2 3 4 5 10 15 20 30

Other Specify: 50

Pause after each one: OFF

Copies Left To Print: 0

STOP FLUSH PAUSE REPLAY REC NORMAL BUFFER

Exit

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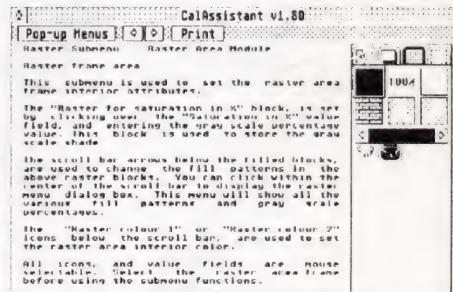
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DeskJet Interface

I recently decided to upgrade to a Hewlett Packard DeskJet 500 printer because I had become disenchanted with the quality of ribbons available for my 24-pin dot matrix printer. Whilst the DJ500 removed any future ribbon problems, it did present me with one that was even worse.

R.L. Tufft

It is well known that the electronic integrated circuit in the ST that provides the signals to the printer is right on the edge of being incapable for the job, and that some are nearer that edge than others. Without going into technicalities, the integrated circuit or chip is not provided with 'buffered outputs' which means that the chip has a limited output power capability particularly when working into a load (e.g. printer cable) which might be highly capacitive. For those persons not clued up on that last term - capacitive - I'll explain. A capacitor has the ability to take power from a circuit and to become charged up. Naturally this charging process takes longer if the amount of power (current to be more precise) is limited. Similarly the time taken to discharge (draw off the electrical charge) is determined by the load resistance and, of course, the amount of charge stored in the capacitor. You can think of the capacitor as being a sort of battery which can be charged quickly and then discharged quickly when necessary.

Most digital electronic circuits are designed to be able to respond to signals that might take less than a microsecond to swing from a high value to a low value or vice versa and if a capacitor, for example, is connected to that circuit then the time taken for the charge to change will be dependent on the power of the signal and the capacitance value. While the charging is taking place the applied signal voltage is unable to rise to its maximum value quickly unless the signal source can push-in a strong signal. Similarly, when the signal source tries to reduce to zero then the charge on the capacitor attempts to keep the voltage high. The outcome is that the signal is

fighting the capacitance whenever it tries to increase or decrease.

Unfortunately, it is not possible to remove any unwanted capacitance which might be present and the standard printer cable is no exception. The structure of the cable and its length determine its capacitance. For these reasons many digital chips have what is known as a 'buffered output' which can supply or sink (absorb) higher currents which will be able to charge or discharge the cable capacitance more quickly than will an unbuffered output. Such an arrangement does not remove the capacitance but rather swamps it with brute force by ensuring that the transmitted signal is able to charge and discharge the inherent capacitance very quickly. By 'quickly' we are thinking in times measured in millionths of a second. Digital circuits prefer a signal that increases or decreases from one voltage level to another as quickly as possible and a highly capacitive load will slow down that voltage change. The DJ500 is more sensitive to the quality of the control signals than most dot matrix printers.

I carried out some tests on the output available, with the printer lead connected, from the chip which drives the printer and found that the data output voltage levels were satisfactory but the 'strobe' output signal was very poor. For those of you not familiar with the term 'strobe' we can liken it to traffic lights, which controls traffic flow, but which fails to change the lights when required and in a consistent manner.

An add-on piece of electronics has already appeared in ST Applications, Issue 2 - January 1991, designed to overcome this problem, but it was a belt and braces approach which would take care

of the most serious conditions. However, in many instances the source of the trouble is solely the 'strobe line' and a simplified and very much lower cost approach is worth considering.

In my case, I could not be certain whether the DJ500 would work correctly even if I made sure that the printer was switched on before the computer; sometimes it worked and sometimes it didn't. Not having the bits and pieces to hand to build a complete buffer I decided only to take care of the 'strobe' line. The number of components comes to a grand total of two - one transistor and one resistor - plus a small piece of solder and a short piece of plastic insulation tape or even sellotape. Time to carry out the work took all of fifteen minutes. Testing took longer because every conceivable means was taken to try to make the modification fail. I find that I can switch the computer and printer On or Off in any order; switching off the printer when it is already printing, or the computer when it's talking to the printer, is problem free.

Obviously it is not possible to guarantee that such a simple modification will work in every case, but mine was particularly bad so it has everything going for it. Cost is low - the transistor plus the resistor cost a grand total of 19 pence. What you will require is a steady hand and the expertise to neatly solder five connections. All work is carried out on one end of the printer cable and will be hidden inside the connector.

The modification needs to be carried out on the ST end of the printer cable. Do not be tempted to work on the printer end of the cable because it's almost certain that the modification will fail to operate correctly.

First. With the computer and printer switched off, unplug both ends of the printer lead then open up the connector case (this has 25 pins) which plugs into the computer. The case might be held together with screws or small lugs which clip the two halves of the connector together. Separate the two halves and you will be presented with a forest of small wires but don't worry. Look at the pins which normally plug into the computer socket and you'll see that the pins are identified with a number from 1 to 25. Identify pin 1 and unsolder the wire connected to it and then have another look at the pin numbers and identify the group of connections that are joined together; they will be numbered from 18 to 25 inclusive but do not unsolder any of them. You should now have just one wire removed from pin 1 and you will have identified connections 18 to 25 inclusive.

Second. Pick up the ZTX500 transistor and identify which of the three connections is which by comparing with Figure 1. Splay out the transistor leads to give you more room for soldering and then solder one end of the resistor to the transistor middle lead 'b'. Next cut a narrow strip off your sticky tape and fold it around the transistor lead, soldered joint and resistor lead to provide a measure of insulation.

Third. Solder transistor lead 'c' directly on to plug connection 18 positioning the transistor so that the unsoldered end of the resistor and the not yet used transistor connection 'e' is pointing in the general direction of pin 1 from which you previously unsoldered the wire. Solder the free end of

the resistor to pin 1 cutting back the length of the resistor lead if necessary. Cut another thin strip off the sticky tape and fold it around the resistor wire and the resistor body.

Fourth. Solder the wire you originally unsoldered off pin 1 on to transistor lead 'e' then use another strip of sticky tape to fold around for insulation. The soldering is now completed and for extra safety to prevent anything moving and shorting to other connections or the connector case, which in some instances might be metal, use up the last of your sticky tape to lay over the transistor and stick to the forest of cables. There should now be no bare wires showing except the short transistor lead 'c' which you soldered to pin 18.

Fifth. Reassemble the case halves to the connector after checking that you have connected everything correctly and you're ready to go.

If you're using a dot matrix printer it is unlikely that you'll see any difference unless it's untypical but if you're using a DJ500 then you should be able to switch it on before, after or at the same time as the computer. Or even leave it switched off until you're ready to use it. If the chip in your computer is a real poor one then you might not be any better off for the modification; in which case you'll have to go for the full modification using a buffer unit in the printer lead as described in ST Applications Issue 2.

Components

- * 1 off: Transistor ZTX500 (PNP 'E' line Ferranti) or an equivalent which is plastic encapsulated to reduce any possibility of short circuits to other connections or the plug case if metal). Note that if you select a different transistor then you must use a small signal PNP device.
- * 1 off: 1/8 watt resistor 3k9

(3900 ohms.) Not critical within range from 3k9 to 5k6 (3900 to 5600 ohms).

- * 3" (70 mm) Length PVC insulation tape. A neater job can be made if 1 mm tubular plastic sleeving is used to slip over each of the soldered joints and short lengths of bare wire but operationally the method described is satisfactory.

This information is provided in good faith and neither the author nor the ST Club can be held responsible for any mishaps you might suffer. If you do not feel capable of carrying out the work then obtain assistance from a more competent person.

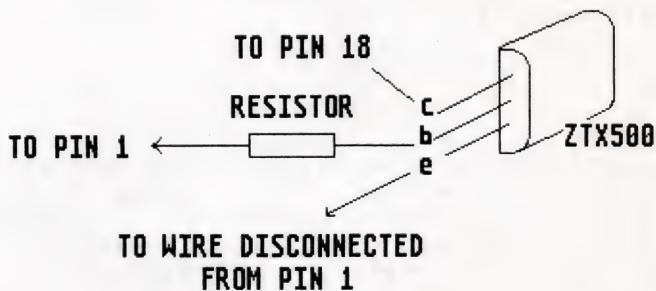
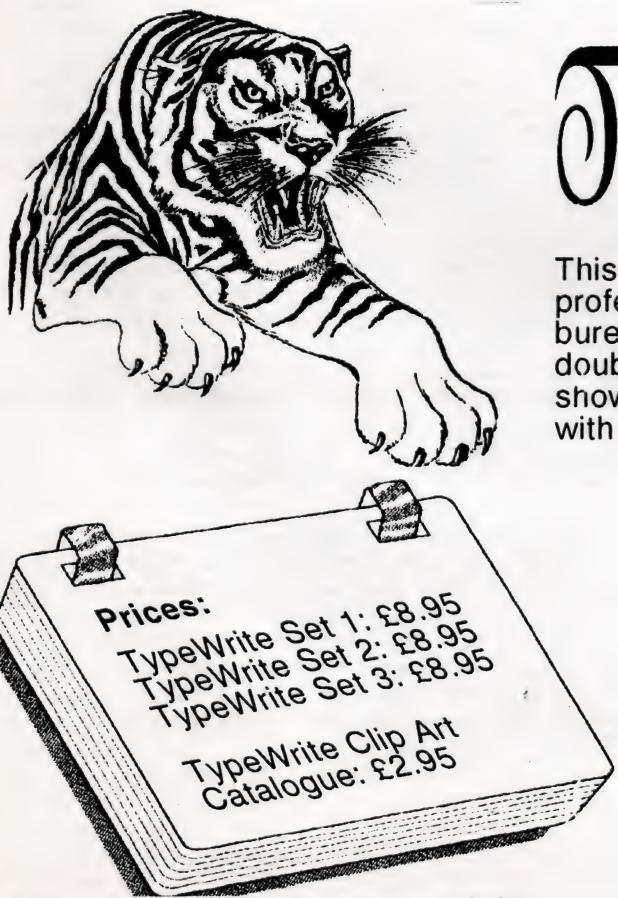


Figure 1



A5 binder to hold clip art pages: £2.25

TypeWrite Clip Art

This is a series of high quality 300-dpi clip art professionally produced by the TypeWrite DTP bureau. Each set contains 100 IMG files on four double sided disks. The associated catalogue shows all of the images, printed full size, together with the file name and disk number.



Grafix Arts

Paul Keller

TECHNIQUE – Shadows

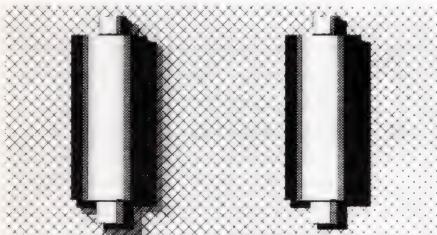
Last month we discussed the importance of light, and this month we would seem to be discussing the importance of its absence!

In this article we take a look at Shadows, those areas in our pictures of a relative darkness; or, as your dictionary might tell you, 'a dark image or shape cast on a surface by the interception of light rays by an opaque body'.

It is this darkness which, when used to good effect, helps give a kind of 3D life to your pictures, a life which distinguishes them from other flat drawings which exclude them.

Shadow edging

A favourite shadow technique of mine is the building up of a shadow's edge to merge with the background. Eg. a cylinder on a white background may at its darkest point have black in its shadow. But as you go further from the cylinder you make the shadow weaker by layering the edges with lighter colours. This is done in much the same way as anti-aliasing except that it works with layers and not simply the stepping edge boundaries.



△ The left cylinder shows a layered shadow, the right cylinder shows a single black shadow.

Text shadows

Some of the art packages for the ST have this function built in with any text editor they might contain. But often the shadow of such a function will simply block out any area below it. This is fine for simple shadow effects or if you only have a single coloured area below it. While this is not a true interpretation of a realistic shadow, it is often better for making something stand out more from your picture than a realistic-looking shadow might do.

To obtain more complex and realistic

text shadows, you might try the following guide.

Use three screens, one for typing your text and the other two as work screens with the same picture on it to which you wish to add your text. Cut out your text as normal and place it over your second screen in the desired position. Now, from work screen one create a copy of your text as an outline-only image. You can paste it on this screen for reference. Give this outline a colour which has been least used in your picture, perhaps white or black. Paste this down (while in X-ray mode) on to screen two in the area you wish to use your text shadow. Don't worry about it cutting through the original text you placed down. Cut out a block around this text and shadow, clearing screen two, and now using it as a work area. Paste down near the top of the screen and also place a copy below in case you make some horrific mistake.

Go back to screen one, grab the original text and place it over the main text block, thereby repairing the damage done by the outline. Entering a zoom mode you are happy with, cut away the outside of your text image to leave you with a cut part of your picture in the shape of your text. This cut image can now form the basis of your shadow - make sure you have a copy of it before continuing. The aim of this complex shadow is to have its colours darker than those of your picture. If you are using Spectrum 512 this is easy to do with just one command as that package works with more than the standard 16 colours palette. If you aren't, however, you will probably have to change each of the colours individually.

Taking a package such as 'Degas Elite' as a popular example, select the 'Change' function, using this to re-colour your cut text shape. Start from your lightest palette colour in your text shadow and change it to a colour which is similar but slightly darker. Do this with all of your colours using the same 16-colour palette from your picture. When finished, place it over screen three in x-ray mode to give you a much more convincing shadow effect than the simple black block you normally see.

Some possible problems with this effect might be found when x-raying it over picture three. If the x-ray text shadow contains background colour in it, when placed over picture three the part of the picture it is over will show through. Erasing that part of the

picture and placing the text down again will solve that problem.

The other problem is one of colour shades, and will be dependent upon the colour palette used in your picture. Experimentation would be well recommended here and hence the need to keep a copy of your text shadow.



△ Complex shadowed text

Still-life shadows

These shadows will rely on the technique above in regards to creating more effective shadows other than the simple black colour method.

Take a building for example. Casting some light above it (such as a sun) will create all sorts of interesting shadows, shadows which will make the building stand out with a much better 3D effect. The distance and angle of your subject from its light source are important factors if you wish to recreate an accurate interpretation of such a still life. There are some art packages around which help with this to a high degree, most notably ray-tracing programmes and better still 'Cyber Studio' for object manipulation and animation. They calculate the shadows for you dependent upon the distance and strength of the lamps you use to illuminate your subject.

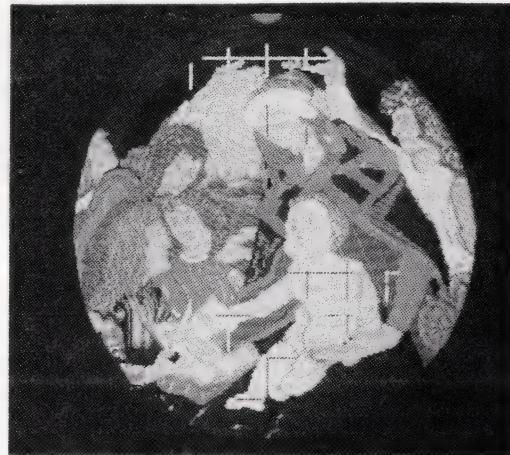
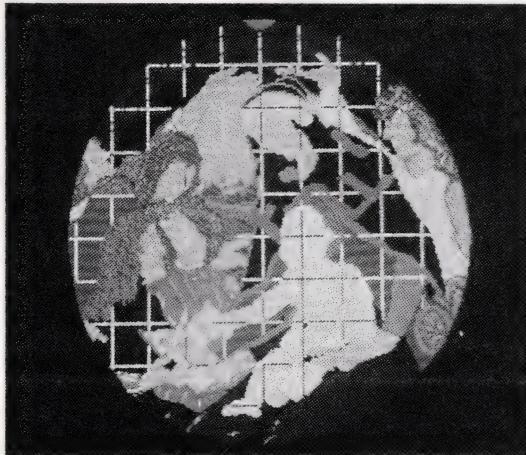
One possible drawback might be lack of detail. If, like me, you love to position those little dots one at a time for intricate positioning and flexibility then you will have to use the good old fashioned EYE in place of all those computer calculations.

Sometimes you will find with certain ray-tracing packages that by the time your ST has rendered an image (one to twenty hours, depending on the package), you could have drawn it yourself, faster!

Next Month: Detail

On the box

MADONNA OF THE MAGNIFICAT



(3) Working consistently in the default Zoom mode I added more detail to parts of the picture, especially the hair. I finished the background landscape: it is carefully made lighter compared to the dark brown hair to the left of it, so as not to clash and lose any perspective of distance created. Parts of the grid are erased and replaced by further details. Then more base colours are added - for the final time I make a change to the palette: the sky is made a lighter shade of lilac. This colour also doubles as a shade of grey when used in fine detail. The grid is still kept in place where it is needed, and reversed in areas of great lightness in order to see it better.

(4) I added more face details and tidied up earlier efforts. The secret for getting such detail in the hair and faces relies heavily on detailed anti-aliasing in ZOOM mode, and a good range of shades from dark to light of the colour you wish to use the most detail on. To make the hair more realistic, I started with the base colour, the darkest colour in this case, and the next shade up was used to form the impression of curls and locks of hair. To this shade is added another lighter shade in a smaller amount, usually at a turn in the curl, and again to this shade is added a lighter. This last shade is normally no bigger than one pixel. This effect gives the impression of depth (highlight), making the hair stand out more.

Next Month: Madonna 5/6

TOOLS – Rays

This is a line tool with a difference: it is essentially a group of lines which have the same central point and which are drawn out from this central point.

Its use and function are varied, but people often under-rate it: "That's great, but what can you do with it?" Quite a bit if you experiment with it, would be my answer, as most art packages allow you to use other effects in combination with the rays function.

Normally, each line of a rays tool can be spread through a selected colour range. This use allows you to make sparkle effects in specific colours only. For example, for some snow sparkles a range of four greys might be useful, or maybe for some grass tufts a swing of only 180° needs to be used and the grass built up with some green lines. But one of the main uses I find for it is in creating perspective lines and angles for any of my pictures which need them. In such cases I often use a snap or grid function so as to keep the positioning even, and if I am simply drawing a perspective horizon grid I will also use a mirror function. This means only one side of the screen need be worked on at any one time. When drawing such a grid it is wise to work

from the bottom centre of the screen to the top, as this gives you plenty of drawing room.

The greatest advantage of 'Rays' is in the time it saves over the repositioning of the point of origin, as each line which is formed by rays is connected to the central point of the ray you are drawing. This means there is no need to reposition the start of your line as your next line is still drawn from the same centre. Each of the lines you draw with rays is rubberbanded, which means the first time you click the mouse a line is in rubberband mode and can be moved 360° around your

starting point. It is not placed down on your screen until you click the mouse button a second time. It is also possible to move the rubberbanded rays line around in a circle with the mouse while at the same time holding down its button. This causes many more lines of the ray to be formed at any one time from just two mouse clicks. As you move the mouse you will see that the faster you rotate while pressing down, the more spaced out the lines will become and the fewer of them there will be.

When you change a line fill pattern this also effects the rays tool as it uses the line command as part of its function. So it is easy to have patterned rays and this is useful for interesting texture effects when using more than one colour.

Next Month: Airbrush

LAST WORDS

"The imagination is not a state: it is the human existence itself."

William Blake

Advanced ST System Programming

Part 3

Unusual Objects (1)

Named File Selectors

Many GEM programs use the standard GEM File Selector to allow the user to choose files to save or load, as they should do. However many give no indication on whether this is a Save or Load choice, for example, so it is possible for the user to accidentally do a Save instead of a Load, with dire consequences. The Macintosh, the classic model of friendly user-interfaces, avoids the problem by having two different file selectors, one for Save and the other for Load. It also allows you to add a suitable title to either, leaving the user no problem as to what he is about to do. Of course it also allows you to make it bigger (showing more files), add buttons, and selectively filter all shown files, but I digress.

OS 1.4 and later includes the `fsel_exinput` call, which allows the title of the file selector to be set to anything that is required, but there are still a good number of pre-1.4 users out there. My first object example is to display a title at the same time as the standard file selector indicating its purpose to the user. I cannot claim any originality for the idea (I think Fast BASIC did it first) or for its first implementation (I first wrote the code for the HiSoft editor), but the method works, and in every screen mode too!

The problem is how to get something to appear at the same time as the normal GEM selector. One method that appeared in the PD world was to search for the object tree in memory, looking for

a pointer to the words `?Item Selector?`. When it was found it was replaced with the new pointer, then the GEM call would use the modified tree. Hmm, a nasty programming trick, in my opinion, as it broke on a wide range of machines. This horrible hack fails on non-USA/UK machines (as `Item Selector` is something entirely different in German/French/Swedish etc) and on TOS 1.4 and later (as the English string changed to `?File Selector?`). It also didn't have any effect on any third-party file selector replacements.

My method is to draw a box containing the required text below the selector, then invoke the `fsel_input` call itself. The trick is to get the box to always appear in the right place, regardless of screen mode, present or future. It so happens that the GEM file selector main box is always 40 by 19 characters in size, and will remain so (the TOS 1.4 selector is greatly changed but its size stayed identical as too many screen displays assume it). By carefully designing an object tree consisting of two objects we can make our special message appear underneath the GEM dialog, regardless of screen size (see box-off - File Selector Calculations).

Having said that designing object trees by hand in certain languages is only for masochists, here I am about to beat myself! In fact, given the exact control required over these objects, building the tree by hand is actually easier than using an RCS. It can even be done in BASIC, a language not really suited to hand-built

Popup Resource

This consists of one form, called `POPUP1`, which should have a root object which is a `BOX`; making it shadowed looks best. Within the box you should put a list of strings, as well as disabled lines of `---`s, like menus. One of the strings should say `Quit` and have the name `MQUIT`.

Anyone that has programmed with dialog boxes should have at least a passing knowledge of AES objects and how they work.

While such things as using dialog boxes is reasonably well documented nowadays, there are many other things that can be done with them. This together with the follow-up article next month shows a few unusual, but very useful applications and also shows the quite rich library of AES calls which considerably help the programmer.

Readers who are not familiar with objects are directed to the 'Basics of Objects' box.

resources because of its lack of structures, initialisers and C-type strings.

I must admit I felt a certain amount of satisfaction the first time I tried this code on an early A4-sized monitor (on a Silica stand at a show about four years ago) and it worked, still appearing underneath the box. The only problem with this method is that some file selector replacements are not the same size as the standard one, so obliterating the carefully constructed message. Oh well, you can't win them all.

Objects from BASIC

I have to confess that handling objects is best done in C; after all they were designed as arrays of structures and are easily handled as such. The trouble is that users of other languages will have real problems trying to convert any C lists, so I'll stick with BASIC. In

order to separate the lowest-level object-manipulations from the actual program, I created a header file (really a library file) called `OBJECT.BH` which contains all the nitty-gritty. It contains various AES constants, the offsets to the object structure itself, various utility functions and sub-programs to alter object attributes. I tried to follow some sort of naming convention, as follows:

`FNobj_xxx` function reading a particular object attribute, e.g. `FNobj_x`

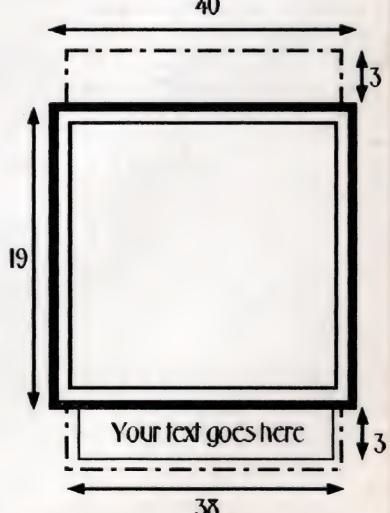
`OBJ_XXX` sub-program to set a particular attribute, e.g. `OBJ_X`

`OBJC_XXX` a call to supplement the AES, hence the use of `OBJC_` as a prefix

By hiding these away in a separate file, conversion to other languages should be easier and the main code should be easier on the eye. In C for example most of these could be

File Selector Calculations

Everything relies on the fact that the file selector is a centred box of size 40x19 characters. The object tree needed consists of a large `IBOX`, of width 40 but height 25. The width is the same as the main box, but the height has three characters more on each of the top and the bottom. The other object is a button (so chosen so it will automatically be centered on both axes) whose size is 38 (40 of the main box minus a gap of one character each side) and a height of 2. Its X position is 1 (calculated from $(40-38)/2$) and its Y position is 22 (calculated by $19+3$). I hope this is clarified by this diagram:



The Basics of Objects

An object is basically a (rectangular) entity which has an x-y position, a size, a type and various attributes. Its normal use is as the constituent parts of dialog boxes and menus, as found in most GEM applications. Detailed documentation on objects can be found in suitable technical books, the best of which I think are Prospero's manuals and the HiSoft WERCS Manual (OK, I confess; I wrote much of the latter). Many programming language manuals also mention them, at least in passing.

One object is seldom useful by itself; objects are usually collected into object trees, which are in fact arrays of objects. A dialog box is an object tree, whereas a button within that dialog box is a single object, for example.

Objects are normally designed with a Resource Editor, then saved into a resource file. It is also possible to construct objects by hand, using C structures or assembly-language, or, for the masochistic, in other languages such as BASIC or Pascal. While it is possible to construct object trees by hand it has very few advantages and lots of disadvantages. Using a resource editor means you can actually see your trees as you design them and try them out before having to write any code to use them. I use WERCS for all my resource work for two main reasons: it allows accurate control of every object (including index, coordinates and size) and can produce header files for every language that I use (BASIC, Asm and C).

Objects within resource files have their sizes and positions stored not as pixels but as character multiples. This means that the system font can change size without affecting displayed resources, as the character values get converted to pixels by the rsrc_load call. This is required even before TTs and big screens as the system font in monochrome is 16 pixels high, but it is 8 high in low and medium resolutions. Character widths are presently 8 in all modes, but don't bank on it staying that way.

defined as macros which directly access the object structure. At least in BASIC there's no problem with type conversions, something that can get to be a nightmare if using Pascal or, to a lesser extent, Modula-2.

Pop-Up Menus

Another idea worth borrowing from the Mac is that of pop-up menus; usually after clicking on a particular button a list of items appears. The AES object library makes this pretty easy for us to emulate, fortunately. I've chosen to invoke a pop-up by double-clicking in my test program with the user keeping the button down to produce the pop-up. Releasing the mouse when it is over the required item selects it; this is the same as the Mac. You might want to implement it differently, perhaps requiring a click to select an item; the code is pretty flexible. To exit, double click and hold the button down; move to *Quit* and release the button.

The first thing to do is create the resource file *POPUP.RSC* (as described in the box-off) and its header file. The complete code for *POPUP.BAS* can be seen in listing 3.3.

The main routine is the function

FNPopUp, which takes a tree number, x-y co-ords and a starting object number as parameters. The x-y pair are recommended and would normally be the current position of the mouse, which in this example are taken from the *evnt_button* call. The starting object number is that which you want to appear under the mouse, which in my example is the last selected object, but you might want to make it always the top item, for consistency. The function returns the selected item number, or 0 if none was selected.

As with menus, you can disable or tick items in the pop-up, though by modifying the object structure directly; don't try using the AES *menu_routines* on pop-ups.

Something that I haven't included are routines to save and restore the area of the screen underneath the pop-up menu, though where such code should go has been indicated. The *blit* routines presented in last month's article would be ideal for this.

I confess that using *evnt_button* is a cop-out - demonstration programs are so much clearer without having to use *evnt_multi*, but seldom can real programs get away without using it.

```

' Listing 3.1
' Named File Selector
DEFINT a-z
LIBRARY "gemaes"

CONST ob_spec=12,ob_sizeof=24
CONST FMD_START=0,FMD_FINISH=3

REM $OPTION Y+,V+

DIM SHARED junk,fsel_obj(23),fsel1
INIT_NFSEL
path$=".*.*": file$=""
DO
  NAMED_FSEL path$,file$,"Your Text Here",ok
LOOP UNTIL ok=0
SYSTEM

SUB INIT_NFSEL
LOCAL i
FOR i=0 TO 23
  READ fsel_obj(i)
NEXT i
fsel1=VARPTR(fsel_obj(0))
rsrc_objfix fsel1,0
rsrc_objfix fsel1,1
END SUB

SUB NAMED_FSEL(VARPTR path$, VARPTR file$, VAL title$, VARPTR result)
LOCAL t$,x,y,w,h
' set the button text pointer
t$=title$+CHR$(0)
POKEL fsel1+ob_sizeof+ob_spec,SADD(t$)
form_center fsel1,x,y,w,h
junk=FNobjc_draw(fsel1,0,1,x,y,w,h)
fsel1_input path$,file$,result
form_dial FMD_FINISH,x,y,w,h,x,y,w,h
END SUB

DATA -1,1,1
DATA 25,0,0 :REM G_IBOX,NONE,NORMAL
DATA 0,0,0,40,25
DATA 0,-1,-1
DATA 26,32,0 :REM G_BUTTON,LASTOB,NORMAL
DATA 0,0,1,22,38,2

```

*** Listing 3.2 is on page 52. ***

Some Things You Probably Didn't Know About Objects But Were Too Afraid To Ask

Crashing on Cursor-Down

If you have a dialog box with editable fields you must make sure that the last object in the tree is not editable. If it is and you cursor down (or press Tab) then, if you are lucky, you will get a cursor in a strange place on the screen; more usually the AES will bomb out. This is caused by a bug in the form handler present at least up to TOS 1.4.

Size Is Important

The AES menu/alert buffer is only a finite size; if a menu is too big then nasty things will happen (see article #2 for details). The official line is that a menu must not be bigger than a quarter of the screen; a most unhelpful description as a menu that comfortably fits in a quarter of a monochrome screen can be much bigger than a quarter of a low-res screen. The problem is most acute on ROM 1.0 machines in low-resolution, when the buffer is at its smallest (\$25A0 bytes). I've tried to work out the maths to convert this into a formula using pixel width and height, but with no success. If you have a program whose menus might be too big, I can only suggest trying it on a ROM 1.0 machine in low-res and see if you can *Quit* successfully after pulling down each menu - look carefully for bombs on exit.

Strange Menu Displays

If your program makes regular calls to *menu_bar* (most don't, but some do) then you may find that the line drawn underneath doesn't always appear in black. This can happen after the AES has drawn certain types of form, particularly *BOXes* with no border, and can be cured by issuing a *vsl_color 1* call using the AES's own VDI handle, before the *menu_bar*.

Going On-Line

Captain's QWK

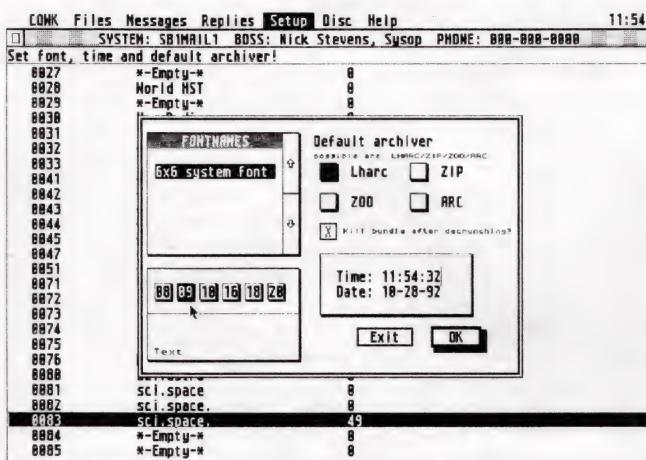
CAPTAIN'S QWK (CQWK) off-line reader is from Dirk Hoeschen of Germany and I tested V1.3e. It is Crippleware, where the restriction is having to enter your name every time in a dialog box before writing a message. Registration of £10 (£2 to females and Michael Jackson) gets you a key which overcomes this niggle. C-QWK is compatible with the ST, STE and TT in all resolutions except 320 x 200 and works very well with OverScan. As with MTQWK, font sizes can be changed and GDOS fonts used. A built-in ANSI emulator enables the viewing of BBS logos and other files using these characters which are common on PC-based BBS systems.

Windows

Setting up is easy with the usual configuration of pathnames for work folders and compression programs. After the decompression of a QWK message file, the BBS Logo and Bulletins are displayed. The message reader is based around three windows. The top-most is the List of Areas or Conferences. Moving the highlight bar with the cursor keys to the conference of your choice and pressing Return presents the second window, a List of Headlines or message headers. Any message can be chosen giving the third Message window. The ESC key enables you to go back a window at any time. However, the selection of areas, messages and windows cannot be made with the mouse. On the whole this method works well especially if you can restrain yourself from reaching for the mouse! GEM menu items have keyboard equivalents but when selecting an item with the mouse, it is often very infuriating to find that it cannot be used on the next operation, such as message selection or scrolling.

Messages can be printed or exported to a text file, where additional messages can be appended if wished. This is useful for keeping a separate file of references. Messages addressed to you can be read separately and it gets around the TurboNet QMail bug which

Another program joins the battle of the off-line readers, which in style falls between that of MaxiMiser and MTQWK. Mark Baines takes a look.



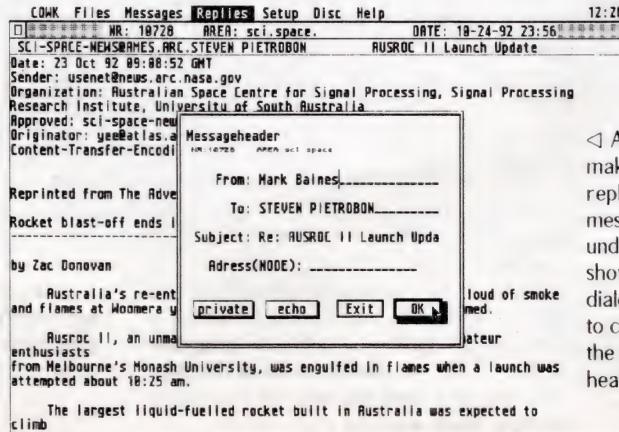
△ Selecting a smaller font size with the Areas window behind.

causes the wrong messages to be marked. There is an indication of which messages have been read which can be helpful, but the movement through any message area is only forward, which isn't. A reasonable Search function is provided which can search across areas but has the restriction of stopping after 100 messages. Scrolling is faster than MTQWK with the vital page scroll function, sorely missed in MTQWK until v1.09a.

Entering messages

Replies to messages is easily done by pressing Alt-R but you always get a dialog box for altering the details of the message header. This is cumbersome and

usually unnecessary. Although pressing Return will get rid of the box (with the provision that without registering the program you have to enter your name), users should be given the choice of altering details and not have it imposed upon them. Quoting from a message is rather like MaxiMiser where the required block has to be selected by moving the highlighted bar up and down the page and pressing Return twice, again awkward and restrictive. MTQWK's method of automatically quoting the whole message which you can selectively delete and edit is far more versatile. It enables your various remarks to be inserted close to the relevant section of quotation more easily



△ About to make a reply to the message underneath, showing the dialog box to change the message header.

Update

MTQWK is now at version v1.09a and is still supported on TurboNet. For various reasons, support for MaxiMiser has died in the UK.

rather than have them all inserted at the bottom.

You can import a text file into your messages and text macros can be set up on the function keys. Tag lines are inserted at the end of each message as in MaxiMiser. Messages can be re-edited but any killed ones are not deleted at source and still included in your REP file for the BBS to delete.

The editor

Up until this point the program is usable and quite functional, presenting a logical system of working. I could even learn to live with its interface foibles were it not for the text editor. This is quite poor and totally unusable for anyone that has to enter more than the rare, odd message. The editor is constantly in overwrite mode, there being no insert mode as with normal editors. I have forgotten the number of times I have looked up from the keyboard to find that I have written over text. The delete line function didn't work and text on adjacent lines cannot be joined together after an edit, resulting in a total mess. If you are a comms user who rarely enters messages (why?) then C-QWK could be the off-line reader to use, but to any serious comms users I have to say that I cannot recommend that you investigate C-QWK v1.3e. It is my duty to point out though, that v1.4 of C-QWK has been released which I have been unable to get hold of, but which reputedly solves all of these problems. I hope that this is the case, because with a good editor C-QWK will appeal to those users who I know don't like MTQWK's strict GEMness and those that find MaxiMiser awkward and its TOS interface unappealing.

STICKS AND STONES

Whatever happened to educational software? Günter Minnerup argues that seeing the computer as a learning machine is getting the wrong end of the joystick.

This Christmas, as has been the case for quite a few Christmases now since the early 1980s, a lot of computers are sold with an emphasis on their educational value. Now I know that by the time you are reading this we will be well into the New Year, but of course that is precisely when all the sales hype will have to be tested in practice. What use, exactly, are the kids going to put their shiny new machines to? To run educational software? You bet they will. In nine out of ten cases, they will be running for the glossy games mags on the newsagent's shelves, pestering parents for a couple of tenners for the latest mega blockbuster, and swapping hints and pirated copies with their schoolmates before the first Easter eggs appear in the shops.

Since the keyboard-less consoles have made their startling comeback, few children actually want a computer for Christmas. But they do get them, often as a compromise between the educational aspirations which their parents harbour for them, and their own preoccupation with zapping aliens and wiping out entire continents at the press of a joystick button. Even before Nintendo and Sega arrived on the scene, Commodore and Atari built the bulk of their combined market shares on this dual appeal: with keyboards attached, the C64 and 400/800, later the Amiga and ST, could certainly be used for all kinds of serious pursuits and there was even respectable educational and business software for them. But the bottom line was always their multicoloured graphics and their status as the leading games platforms.

Perhaps the schools should have adopted Commodore and Atari computers, but of course they did not. Instead, the miserable cartel between the government, Acorn Computers and the BBC locked them into a standard which was neither that of business nor that of fun. Before the advent of the IBM PC, the Apple Mac, the Commodore and Atari machines, the Amstrad CPC and the Spectrum, the Acorn BBC may have had some *raison d'être*. But from 1984 or so onwards, the continuation of the Acorn cult was simply ridiculous. It still is: the Archimedes is a fine computer, but nobody outside education is using it. Acorn could not believe their luck at gaining a captive market (which did not stop

them from nearly going bust and being taken over by Italian giant Olivetti), and the BBC sent everybody and finally themselves to sleep with the incredibly boring "Making the most of your micro" and "Micro live" programs, pretending to the very end that there was no computing life beyond Acorn.

Although totally inadequate in terms of even beginning to meet the very real need for training in Information Technology, this effort still managed to place a new burden of guilt upon teachers and parents. Having gone through Training College when typewriters were still in fashion, teachers were by and large helpless when confronted with the new technology and, as is usually the case, left to their own resources to cope. Since schools had nowhere near enough money to buy sufficient numbers of computers, they fell back on their traditional fund-raising methods to acquire more, along with the minibus and the musical instruments.

Smart parents with the necessary spare cash soon got the message: to secure their offspring an educational headstart, all they had to do was to buy little Kevin or Tracey a computer of their own. Or so they thought... Kev and Tracey didn't want a boring BBC, which in any case was rather expensive, and insisted on a Spectrum, an Amstrad, an Atari, a Commodore - cheaper, more colourful, and then also marketed with heavy educational pretensions. Mummy and Daddy complied, and waited for the promised flood of educational software. In vain, as it turned out.

From what I have seen of educational software, it is just as well that we did not get more of it. The fact that computers are good at repetitive drills does not mean that children enjoy it, and far too much educational software seems to mistake computers for mere rote learning machines. Even now, with far more RAM, disk storage, faster processors and superior graphics to play with, much of this stuff simply attempts to make books and teachers redundant. The common explanation that educational software did not fulfil its potential because there wasn't a large enough market to persuade programmers and software houses to invest development time in it does not convince me: on the contrary, there would be huge potential mar-

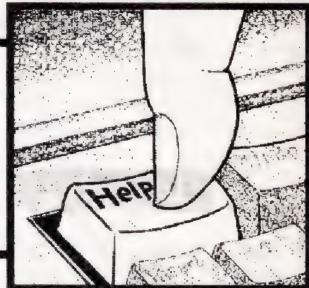
ket for educational software that worked - just think of all those guilt-ridden parents. If there is no such market, it is because the whole concept of educational software, as commonly understood, does not work. Nobody really wants it.

In my own experience of using computers in an educational context, covering all age groups and academic levels both as a parent and as a university teacher, I have always found that it is the "real-life" applications that generate true enthusiasm: using a word-processor to write, an art package to paint, a CAD program to design, a desktop publisher to publish, a sequencer/notator to compose. The computer as a tool to make difficult things easier and to expand students' creativity into realms which they could not hope to tackle without one works, whereas subjecting people to the slavery of repetitive exercises does not. What is needed is not specialist educational computers with specialist educational programs, but real-world computers with real-world software in an educational setting. Not learning machines, but allies in solving creative tasks.

The trouble with this approach is that it runs counter to the prevailing perception of computers as automata whose only purpose is to save human labour. This has fuelled the expectation that somehow computers could replace teachers, leaving students to be taught by an "educational program", just as parents have been fed the illusion that locking up little Kevin and Tracey in their bedrooms with a computer on their desks would somehow educate them, given the right software. The reverse is much closer to the truth: to use computers effectively, you need more teachers to work in groups smaller than the large classes created by traditional, frontal chalk-and-blackboard methods. You need better trained teachers with more free time to prepare imaginative computer-based projects. You need parents able and willing to share in the exploration of what the new Christmas present has to offer.

Thus the malaise of educational computing is nothing to do with computers and their programmers, but the more general malaise of an underfunded and misdirected education system. "Garbage in, garbage out", as my programming friends are saying.

FORUM



PC versus Atari

Wendy Durham - Forum STA 24
 Alan Kennedy - Forum STA 24
 Stephen Murgan - Forum STA 24

I I also had to make decisions about upgrading and like Michael Baxter I looked at what was available, but looked a little wider (and wiser?).

I agree the TT is far too expensive for what it offers, (the STFM/STE is a super machine at less than £300 with good supply of software). For £1600, which was my upper limit, I included the Acorn A5000 which includes a multi-sync monitor, 40Mb HD, 4Mb RAM (I haggled!), 1.4 Mbyte Floppy, and some super software: Impressions, IBM emulator, Draw,

Paint, Music, Edit, BBC Basic (with other progs in the 2Mb OS ROM) and its really superb Multitasking Desktop that is as easy to use as the Atari but about 100 times more flexible.

The A5000 is many times faster than a 486 machine in DTP and Art and Poster work; for pure number-crunching I suspect the empty Maths Coprocessor socket would need to be filled to be faster, but it's no sluggard. I have never had an Acorn/BBC machine, but have taken to it with great ease (and I'm 64).

Screen resolution is so variable, being under software control, from mode 2, 160x256 pixel 16 colours through 640x512 pixel 256 colours, 1056x256 pixel 256 colours, 1152x896 pixel 2 colours, etc., etc. Each is resettable on the fly without loss of screen content or multitasking progs in use, so refreshing after my loss on the ST resetting from mono to colour.

It has the ability to read and write and format ST and IBM discs as well as all applicable BBC formats - in fact, much of my ST text transfer has been so easy it was a pleasure. The dictionary in Impressions is really fast, as are the screen redraws, about 30 times faster than Timeworks on the ST. Even Timeworks on the Acorn is about 15 times faster.

The processor is 32-bit wide with a Restricted Instruction Set and is so good that I am told that Apple and IBM have bought into the British company that designed and developed it.

Hardware video digitisers are available from £50! There is space for 4 Eurocards to plug in the back. I won't go on... but if you really are keen to go quickly and well, look at the Acorn.

Gordon Carruthers

NO PC 4 ME

I Atari and the ST, or should it be the ST despite Atari, have allowed me to get into the world of computing where other systems have failed. I'm not that technically minded but have found GEM to be truly user-friendly. From a humble start of total games playing, I have progressed to the world of DTP and business computing. I cannot imagine being without an ST of one sort or another.

Chris Tofalos

M D C Girvan

Cubase Book

Gary Coxland - Forum STA 23

A Premier Music Services Ltd of 18 Foyle Road, Chandlers Ford, Eastleigh, Hampshire, SO5 3PQ (tel: 0703 260485) distribute "The Official Cubase Handbook" by Geoffrey Ryle published in the USA. Cost: £19.95 plus p&p.

It has been advertised in "Sound on Sound" in recent months: see the April 1992 issue for instance. The book deals with Cubase version 2.2 only. A version 3 edition is promised in the near future.

S Vale

FSP3 Landscape Printing

PL Patient - Forum STA 24

A I've never used a DeskJet, but I think PL Patient should be able to print in landscape with FSP3 easily, on any printer, by changing the page layout to 'wide' before going to the output menu. The printer driver for the DeskJet is provided with FSP3 (FLEETHP.OVL), though you have to use the right FLEET.DEF file to be given the option. Don't get Calamus without trying the demo first - you either hate it or you loathe it.

Deborah Pate

A I haven't got a DeskJet. However, landscape printing on an 80-column dot matrix printer is possible and, no doubt, the answer for the DeskJet is the same. One of the preset page sizes is A4 wide, a double A5. If this is selected then the printer will automatically print sideways.

Additionally, I have had the use of an HP Laserjet IIIP for a week and this will also print sideways automatically.

Three queries of my own. First, as there is no official support for this excellent program and as I am not about to dump it, is there a user group for it? Secondly, the method of obtaining text rotation is crude and results in dreadful jaggies: is there any way round this? Third, before I invest in an HP Laserjet 4, were the problems with lines with PostScript output ever solved?

● No knowledge of an FSP3 user group. You should be able to increase the quality of rotated text by increasing the resolution of the 'temporary' IMG file - using a 600dpi IMG file should make it impossible to differentiate rotated text from the outline fonts. As far as we know the line length problem with Post-Script files has not been solved, but there are a number of tiresome workarounds.

Indexing

A Richard Lane said in the November issue that there was no provision in Protext for indexing across chapters. But there is! In fact, my letter in ST Applications 18 (June '92) gives full instructions. Still, it serves Arnor right, I suppose, for not setting it out in the manual.

Deborah Pate

MIPS

I Please let it be known that the ST (with an 8MHz 68000) runs at almost 1mips, not the 0.25 stated regularly by a popular glossy.

Nial Grimes

MusicTex

Q What I really want to do is write a pre-processor for Mutex and/or MusicTex, the score printing extensions to Tex. I've used the compiler BISON in the past with enough success to convince me that it's the tool to use for the pre-processor. This leads me to my current plea which is for anyone with working copies of the utilities bison.ftp and make.ftp - the last of these suitable for use with GNU C - to get in touch with me. The next paragraph indicates why I need these and why I stress working copies.

BISON is on LAN.66 but the executable cannot be used, on my MegaST4 at least, since it is faulty. I have the source and am happy to work with that but it uses long names which are no use with Sozobon C, my normal compiler. I've tried using GCC (from discs LAN.53 - 56) but that doesn't like my usual MAKE utility. I obtained GNU MAKE (LAN.97) but this bombs out with address error whenever I do anything more complex than printing the version number.

As can be seen from my catalogue of woes, I'm up the creek without a paddle. Any help will be gratefully received, preferably direct to me (0942 817892) since that would be quicker, but through STA otherwise. I have documentation for Bison, extra to that on LAN.66, which anyone can have who wants it.

For those who do not know of it, Mutex is a set of macros for Tex which allows it to print music. It restricts the user to (several lines and even pages of) a single stave but within that restriction produces excellent output with beaming, slurs, chords, verses of songs, etc. With some slight extensions I have made, it is perfect for Busker-type output. On my Mega ST4 with no hard disc and working the whole

time from a ram-disc, I am able to use Tex, Mutex and MusicTex with an acceptable restriction on the number of fonts available. MusicTex is a similar system in that it is a set of Tex macros and it allows up to about six simultaneous staves of music. For technical reasons, slurs are straight (not curved) lines, and so the output can never be as good as Mutex.

I obtained Tex from PDD.90 - 95 and installed a working system even though my knowledge of German is nil. Mutex from WPR.91, MusicTex from a friend in Canada, the Texbook at £25 and the Metafont book at £25 (still unused) allow me to produce output equally as good as that of Notator. Granted, I cannot produce curved slurs with MusicTex but a friend with Notator cannot even guarantee that all his output is there without checking it carefully! Notator is much easier to use with its midi input and WYSIWYG display but the thought of buying an expensive, faulty program from a firm which doesn't seem to want to know about faults turns me cold.

Anyone who wants MusicTex can have it. It came to me, and will go to the ST Club. Apparently, there is a very active Mu(sic)tex user group who exchange music/patches/info via email on a daily basis. The email address for joining the club should be directed to:

mutex-request@stolaf.edu.

There is a warning and a request that seem relevant here. There are many example music files which came with the MusicTex system that just need running through Tex to get output. Some of these are too big for the version of Tex that I have on the ST, and so it is possible for complex music to run out of Tex workspace. There are different-sized Tex systems available on a PC and I wondered if anyone knew of a BigTex for an ST?

Since I am writing, I may as well ask for another couple of items. Does anyone know of a good C cross reference program they can recommend for an ST - one that will take several files as input? I've used some reasonable ones with Unix in the past but no longer have access to these and modifying programs with several source files is a bit dangerous without such tools. Does anyone know where source for Gulam can be obtained? It seems idiosyncratic in some of its responses. Failing that, does anyone know of the source for any reasonable shell, either GEM or CLI? With all the irons I already have in the fire, I'm loth to stick another one in by writing one from scratch!

Barrie Stott

- MusicTex is available on ST Club disk WPR.108

FAX Modems

Desktop Discussions - STA 22

I You know how it is... You read the magazines, phone the dealers, generally suss out the scene then finally reach for the wallet. Two months later, a better product at half the price is released. It makes you want to open a vein, or, better still, kick the cat.

I refer to the very sexy Supra faxmodem in William Hern's article, which seems to be a much more efficient beast than the Phonic faxmodem I have. A word of warning to potential faxers, however. The fax software ST FAX II referred to in Desktop Discussions only works with faxmodems using the Sierra chipset commands. The Supra may or may not conform to this, but it is worth checking from the supplier before committing yourself to a purchase. Fax protocols are even more horrendous than normal comms. You need to know if the software can address the hardware if you opt for separate packages. You may be able to negotiate some kind of money back deal if the supplier can't guarantee that your proposed combination will work. If not, caveat emptor!

In any case, all ST fax software is still leagues behind PC stuff, which, thanks to the uniformity of Windows drivers, has evolved to the point where if you can print it, you can fax it. There are even applications for large companies which use dedicated fax servers over networks. On the ST scene, the total lack of print routine standardisation means that most fax software can only transmit ASCII, IMG or TIFF files, though System Solutions are waiting for the translated version of new German software which allows the direct faxing of Calamus files. If Atari had built a decent GDOS into TOS from day one, all programmes might have been written to conform to a standard output. We might then have been up there with the '486 fast lane boys.

Bob Osola

DMA Chips

Q At last I am able to buy a hard drive, but my STE has one of the "dodgy" DMA chips, C025913-38. Could anyone advise me as to whether I should have this chip replaced first, or should I leave it until I have tried the hard drive (I expect to get a series 2 Progate) and "suck it and see" as the saying goes. Any comment or advice will be most welcome.

Geoff Howard

● Atari will supply a replacement DMA chip for the asking. The nature of the problem is erratic - if you only use the drive for a couple of hours a day you'll maybe never have a problem - but if the DMA chip does go into a tizzy you'll lose all data on partitions that you write to. Play safe and replace the DMA chip.

Spectre GCR

Q As an Italian member of the ST Club, I would like to obtain the advice of other readers of ST Applications about a problem I have.

I recently bought the excellent Spectre GCR emulator by mail order in France. (I know this may sound strange, but Spectre has been unavailable in Italy for the last two years.) Apart from the problems caused by the mysterious lack of a proper manual (I have protested with the dealer and I am waiting for a French translation of the manual on floppy-disk!).

I've nonetheless been able to install it successfully on my Mega STE4 (with 105Mb HD) and I have begun to use it with both excitement and interest.

But... (there is always a "but") since the beginning I've experienced two serious problems that inhibit any serious use of the Mac software: the mapping of the keyboard and the use of the printer.

I've installed System 6.07 and (apart from the sounds bug) everything works. Unfortunately my keyboard - as well as suffering from the different mapping of several keys, further complicated by the fact that mine is an Italian keyboard with a QWERTY layout and letters like "i ñ è * à and é that do not exist on US keyboards - also does not recognize the SPACE BAR, so preventing me from typing anything useful. Is there any system to re-map the keyboard apart from the one suggested by Dave Small in his 3.0 update? This method does not work on my computer.

Turning to the problem with the printer, I own a simple but rugged NEC P2+ that doesn't work in Mac mode; somewhere I read that an FX-80 printer driver should be supplied with Spectre, but on my two disks I have found nothing. How can I find an Epson LQ or NEC P2+ driver to let my Spectre print?

I know these may be naïve questions, but you will surely understand all too well the frustrations a Spectre owner has to suffer, and I think that the experience of other readers as well as the knowledge of Günter Minnerup could be extremely helpful.

Ferdinando D'Amico

Family Tree

I Family Tree version 1.00, on DMG.30 and reviewed in ST Applications, had a major bug, for which we apologise. When the number of people in the tree exceeded 127 various odd and disastrous faults occurred. Version 1.32, now supplied to the ST Club, is free of this fault and has a number of other enhancements.

As a result of releasing the program through the ST Club we have received a number of letters from as far afield as Australia. ST Applications has a wide circulation! The response has made the effort worthwhile. We have replied to and updated everyone whose letters we received, so if anyone has not had a reply blame the post office and write again.

Ian and Mark Baker

- Updated version is on disk UTI.211

Harlekin Bits

Q I have tried out the much praised Harlekin from ST User. However, it often seems to corrupt the screen, leaving disintegrated bits of itself on top of the main program.

John Henderson

Redacteur and Harlekin

Q Redacteur is a fast and wonderful program, but when I use it in combination with the multi ACC Harlekin the cursor speed is far too high, and the character repeat makes writing impossible. I tried to change Harlekin's defaults in the control panel, but even with the minimum repeat and maximum repeat delay possible, typing without getting rapid repeating of characters is impossible. Now I use a combination of Superboot and Mortimer to use with Redacteur, but I am fond of Harlekin and I would prefer to use it. Any suggestions?

Robert Figueras

- Disable the keyboard vector items in Harlekin and they will happily work together.

Hard Drive Size

Q Some years ago I bought an Atari Megafile hard drive. At the time my choice was between 30MB and 60MB, and of course 30 megabytes seemed a lot then. But as anybody knows, after a while one feels the need for more. Is there anybody who has tried to change the drive inside a Megafile and installed, say, a 120Mb hard disk? It seems to me that if I used a similar unit, maybe from the same maker, it should not be a too difficult task.

Maybe I could put the new drive inside the Megafile box together with the Atari drive, although I don't know if there is enough room.

Robert Figueras

Idealist

Q This seems to be a beautiful accessory. But has anyone got a BJ10e driver for it? I have lost several sheets of paper trying to get it right - rather against the spirit of the program!

John Henderson

Printer Drivers

Q Thank you for your help with HP printer drivers for my Ricoh LP1200 laser printer and 1st Word Plus. I have tried out a few of the drivers on disk PTR.11 but find that I cannot seem to get a right-justified margin when using the CG Times font. The screen is justified OK but the printed output is not. Changing to the Epson emulation does not help. Do you know of any solution to this problem? I contacted Ricoh but they do not seem to be able to help me with it.

Andrew C Whyte

• Because First Word does not know how to vary the lengths of lines according to the horizontal space occupied by the characters in the line, it is not capable of printing fully justified text using proportional fonts. Protext and That's Write are intelligent enough in the printing department to allow you to make a suitable printer driver.

No Applications

I I've just bought ST Review, a magazine I'm prepared to support as at least it does include complete software packages, unlike Format, which trails them over several months, and which I have not purchased since June. I was concerned that in ST Review their reader survey omitted ST Applications from the choices. It seems that this publication is not well publicised, which is a great pity.

John Henderson

- Yes, we've always been saddened by the lack of publicity for ST Applications in the mainstream glossy magazines.

DeskJet Matters

A very popular topic!

I I've also used the Inkman Colour Kit refills and have experienced problems with nozzles clogging up. System Insight recommend storing the refilled cartridges in zip-topped bags, with a damp piece of tissue to keep the humidity level up, but even this doesn't prevent the occasional clogging. The solution I found was to stand the nozzles in a saucer with a very small pool of the System Insight cleaning solution. Wipe the head occasionally with a damp tissue, wait for 30 mins, and all should be well.

A very cheap source for black and coloured inks is John Brumwell in Newcastle. He advertises regularly in the MicroMart classifieds, and is selling single-use refills at £3.00 each. Your first order brings a pair of latex gloves, a 20ml syringe with a broad needle, and the refill inks in medicine bottles. He claims that the inks are the same as the ones that Inkman use, and my experience of the black refill is that it's good and dark on the page and free-flowing. No clogging problems so far, but then again it is in continuous use.

The address is: John Brumwell, 32 Redhall Drive, Cochrane Park, Newcastle-upon-Tyne, NE7 7LH. Tel: 091 266 3302.

BTW, he also claims to have used these inks in the same cartridges for 2 years now, but is wary of System Insight's cleaning fluid; "the solution can corrode the nozzles and reduce the lifespan of the cartridge". There could be some truth in this - has anyone else experienced this, or does anyone know what the cleaning solution contains?

Further to John Ridge's DeskJet item in STA 25, I've used Quink black fountain pen ink with no clogging problems at all. I'd agree that food colours should work, in theory, but who's going to volunteer to find out? Not me, I'm on a diet.

If John's reading this, then could he please contact me at 49, Haylett Gardens, Surbiton Crescent, Kingston, Surrey, KT1 2ER. I've got something interesting to discuss with him.

The ST Enthusiasts' Newsletter #12 (Nov/Dec '92 issue) contains a hands-on review of the Inkman Colour Kit and Martyn Dryden's

excellent HPChrome and BJChrome colour printing utilities. STEN is PD, aimed at the serious ST user, and can be obtained free from the address given in the Authorware section.

John Weller

I Just for the record, I bought my HP DeskJet 500 in August of last year and I am still on the original ink cartridge. Initially, I re-filled it with Schaeffer Black using an old hypodermic. Then, whilst in the USA, I bought an Inkman Refill pack, and used one. The other I still have, but have since used the refill bottle (ideal, in my view) to re-charge with Black Quink. There are now signs that one hole occasionally gets blocked and is only revealed in drawings. I can usually clear it by standing the end in alcohol, and very gently blowing in the air vent.

Reg Williamson

DeskJet and GFA

Q Whilst I'm aware of the need to kick-start my DJ500 if it has been turned on after booting the ST, I've not seen any mention in your pages of the following curious effect. If the DJ500 is not even powered up, a GEMDOS (17) call will return 'true', suggesting that the parallel interface is ready to receive data; i.e. the printer is on-line! Now, I can simply look at the printer to see if the green 'on-line' light is on, but programs I've written in GFA basic check to see if the printer is off-line and stop with an alert box if it is. At least they used to! Now they simply consign the hard copy to oblivion. Has anybody got an answer to this silly little problem? There doesn't seem to be anything other than GEMDOS (17) available from GFA basic.

Geoff Wilson

HP Service

I My DeskJet went fuzzy, and so I rang the HP service department with dread, expecting the usual scenario. But they failed to live down to my expectations in any respect.

They told me the guarantee was for three years and asked what time next day would be convenient for picking the printer up.

They came when they said they would, with packing material in the van (who keeps boxes?). It was a Friday. Mid-day the following Wednesday they returned it with a new print mechanism. No cost, no hassle, minimal wait. I'm still faint with shock. The printer, I'm glad to say, is not.

Jane Firbank

• Now if only a well known computer manufacturer could emulate this level of service. Hewlett Packard also excel in supporting developers with masses of technical documentation and loan hardware.

Falcon Feedback

John Watkins - Forum STA 24

Britt Johnston - Forum STA 24
Piper - ECTS Show Report STA 23
Alistair Bodin - Forum STA 15
John Watkins - Forum STA 25

I When, in the mid-eighties, Jack Tramiel left Commodore and joined Atari he took with him knowledge of Commodore's soon to be released Amiga. Tramiel knew then that the high specification of the Amiga was going to be hard for competitors to match, let alone beat, for the price.

So when he moved to Atari he intended to make a machine which would do most of the things an Amiga could, missing out the finer points, but would be very competitively priced. This initiative became the Atari ST which has been a market leader in home computing, at least in the UK, for the past few years and has probably saved Atari from going under.

Since its release the ST has been updated many times. Especially the operating system which has taken more than four years to become fairly bug free. But to people who have watched the ST evolve it was becoming obvious that each new machine release was nothing more than the old machine with a few operating system bug fixes and slight hardware modifications. The same rabbit was being pulled from the same hat.

Things have improved. Atari now have a new machine to offer the masses. The Falcon has attracted much publicity but will it do for Atari what the ST has done for it in the past?

On paper the high specification Falcon seems to be a dream come true. A very powerful CPU in the shape of the Motorola 68030, good graphics, the very impressive Motorola 56001 Digital Signal Processing chip, which has attracted most of the attention, and MultiTOS, the multi-tasking operating system, all come as standard.

So why do I have reservations about the Falcon? Well things get off to a bad start straight away when you actually look at the Falcon. It looks just like an old ST! Why have Atari spent so much time and money developing the brand new Falcon just to shove it into an old casing? Surely it would have been nice of Atari to have designed a new casing for its new front-runner product.

Moving on to the operating system, I was pleased to learn that changes had taken place there too in a bid to bring TOS into line with the competition. I was even more pleased when I first heard that Atari were going to provide a multi-tasking operating system. After all, Amiga owners had had this capability for years. But then I heard that what Atari were actually doing was extending MiNT (an operating system which allowed the multi-tasking of TOS programs but not GEM programs - owing to the limitations of GEM, I hasten to add) and updating GEM to work under it. I had visions of four more years of bug updates and little PD programs to fix this, that and the other.

It has also come to my notice that a lot of old ST software is incompatible with MultiTOS, which doesn't come as a big surprise to me.

When the ST was originally released (and even up to the past year or so) nobody had any idea that future ST's were going to multi-task. So some programmers inevitably didn't allow for this possibility. Writing programs to accommodate future expansions which may or may not appear can, especially with Atari's track record, be a total waste of time and money.

I must admit I am slightly surprised at Atari's approach. Although I expected for older GEM programs to be 'allowed for' under MultiTOS, I didn't expect them to all of a sudden be able to run in a multi-tasking environment comfortably. What I did expect Atari to do, though, was to allow old GEM programs some form of limited multi-tasking and to introduce some new file formats. These new formats would cater for files that needed to run in the new environment. This would have enabled Atari to write a true fully-functional multi-tasking operating system as is already available on systems not much beyond the price of the Falcon.

All in all, I like the hardware specifications of the new machine but I'm suspicious of the operating system. All I can say is that I won't be rushing out to the shops to buy one just yet. I think I'll sit back and wait a while, see what happens. Anyway, here is some more bad news for Atari - I don't think the Falcon is going to be as big a success as some people seem to think it's going to be. The price of a good PC is falling all the time and coupled with this is the massive amount of add-ons you can buy for it. I think Atari will surely have their work cut out for them in the coming year. Let us hope the Falcon becomes the complete and consistent product which it rightly deserves to be.

Leon

CIX#388

MultiTOS

I The event-driven nature of GEM has always been eminently suitable for multitasking and the extensions are all very natural. Most problems with software are due to application writers believing that when their program runs they can do what the hell they like (usually to any old bit of the screen they fancy). The main problem of MultiTOS in use is that dialogs are modal. Atari have converted all their dialog-ware to window-ware now but there is still an awful lot of good PD stuff that is dialog-ware. The modal nature means that you have no access to the menu bar so you cannot switch to another active process (application). Although Atari will tell you that the other processes are still being preemptively multi-tasked and that it is just the user interface that is blocked I would humbly suggest that task switching at the user interface is rather important. Very, very, rather important.

Steve

CIX#390

ReNameIt!

Jane Firbank - Forum STA 24

A Oh, no! A bug! Essentially, ReNameIt! works by reading and writing directly to the disk. This means it bypasses all of the normal GEM and TOS routines and interprets the disk format itself. While Tom Hayslett and I tested this as much as possible (check out the Disclaimer section of the instructions and you'll see what I mean) we missed GEM partitions larger than 16M.

Not long after STA24 arrived in my mailbox, I got a call from Tom telling me he had found not only the bug, but a possible solution. Unfortunately, this solution required another 32K of buffer space, so I reworked some of renaming code, and now it takes 24K less space than ReNameIt! 1.2.

The ST Club does now have ReNameIt! 1.3, with the bug fixed, but since they just received it, I couldn't tell you which disk it's on. Of course, registering the program would insure a current version...

Damien M Jones

Mortimer

Alan Kennedy - Forum STA 24

A I have also been using Mortimer plus v.2.11 extensively for more than one year. Alone and together with Calamus 1.09, Word Plus 3.15, PPM2 and many others. (To get Mortimer working with Cubase, you just have to make a short macro calling Mortimer and assign it to a function key, F8 or F10.)

In the beginning I experienced a crash two or three times, but now I have a configuration which seems to be 100% stable. What I did to keep the bombs away was just the following three small changes.

1) I never use EDIT.PRG. I have instead a set of file selector macros for quick file load. (EDIT.PRG is a small Mortimer utility making the connection between GEM and Mortimer in order to let you start Mortimer by double clicking any file.)

2) No more 'fast load'. You can make disc copying about 50% faster by using a TOS with fast load. I did that with an eprom burner, changing position 5399 in TOS1.4 from \$14 to \$10 but I am not proud of this anymore. I am not in a position to describe exactly what it means, but I am convinced that it made my system less stable than when running with the standard 'no fast load status'.

3) Removing Chameleon.ACC. You do not need it anyway when you have the Mortimer ramdisk with AUTO BOOT on. To load a new ACC, just copy the acc to the ramdisk and press the reset button. Mortimer is so reset-proof that you can reboot on a completely empty disc and still recover Mortimer's Ramdisk, editors, spoolers - everything.

Now I use only one ACC: FastCopy PRO. It is a good supplement to Mortimer, mainly because it is very important for me to have disc copies

with different serial numbers. You get that with FastCopy PRO version 1.0c. Mortimer's disc copy function copies all tracks and keeps the original serial number.

I use Mortimer's flexible Ramdisk a lot, and this has never crashed on me. Therefore, I can't agree about suspecting Mortimer's memory management. But of course, it may depend on which software you run at the same time, and maybe also on how crowded your ram is. When I overflow the Ramdisk, the desktop is no longer able to show directories. All windows show 0 bytes in 0 items. But as soon as you remove some files from the Ramdisk, the desktop becomes normal again. My memory allocation settings are always Mem-top released/autolock OFF.

If you have problems with Mortimer, give 'him' a chance to show how he behaves in a clean environment. My main reason of preferring Mortimer to Harlekin is that Mortimer boots much quicker. As far as possible, I use easy-booting configurations and make a cold start each time it is convenient. Switching the power supply off for a few seconds is advisable if you have a serious crash with bad software. This also keeps viruses away. A clean boat is safer than a dirty boat...

Mortimer3, also called Mortimer Deluxe, will be available in Germany from December 92. The number of files you can edit at the same time is increased from 4 to 10.

Paul Dion

TOS versions

I Andy Pennell (STA 24) mentions the "fictitious" TOS 1.09. I bow to his vastly superior knowledge of the subject, but should point out that the source of this confusion lies not with the popular magazines as he supposes, but with Atari themselves. My 1040 STFM arrived from a reputable UK dealer with the following Atari notice inside:

"IMPORTANT - This Atari ST computer is fitted with the Atari Operating System ROM version 1.09..."

It goes on to talk about how this version was introduced to facilitate adding a blitter. At the time, the notice convinced me (and, presumably, several thousand others) that I had TOS 1.09. I now accept that I must have TOS 1.02 - indeed, many check programmes tell me so.

So what is this magic number 1.09? Do I have some sort of Bermuda Triangle phantom ST or could the whole thing be a simple mis-print? The latter theory is based on Atari's inability to spell "blitter" in the same notice. They refer to it as a "blitier". A final definitive explanation by some knowledgeable person would be much appreciated...

Bob Osola

Version Numbers

Q ST World, for a brief period, ran a listing of the latest released version number of applications software - extremely useful for

those of us who could not bear to bawl through masses of mind-numbing trash about games etc. The title of your magazine would indicate such a listing would not be out of place in your pages!

A J T Smith

• The problem with maintaining lists like this is that its usefulness hinges on publishers remembering to let us know as new versions are released. (Remember that upgrades are often not offered where a minor bug-fix increments the version number - in these cases publishers prefer to offer these 'upgrades' only to users who encounter the bug.) If any publishers want to send us updated lists of their product version numbers then we shall be happy to print them in future issues.

Transfile ST

Q In ST Applications issue 24, the article 'Atari Meets Psion' tells of a program called 'Transfile ST CL' which is used for moving files between a Psion Organiser 2 and an Atari ST. I have one of the new Psion Series 3 palm-top computers and an Atari STE, and would like to know if a similar program exists or is being written for this combination.

I've already telephoned Widget Software Ltd (the distributor of Transfile ST CL in the UK), and was told that "Yellow Computing" in Germany wrote the program, and have yet to write an update!

Brian Tunnard

MicroCare

I I have decided to fold MicroCare on the Atari ST in order to concentrate on a PC version of the scheme. The closure will take place as of 26th September 1992. Any outstanding royalties will not be collected and can be donated to a charity of your choice.

In view of this change, all existing MicroCare disks can now be classified as Shareware, with users being asked to make a donation to a charity of their choice (instead of paying a registration fee to MicroCare). Of course, if you'd like to drop the disks from your catalogue, then that's fine too, although I'd like to think that some users might actually send a donation to charity if they appreciate the contents of any of the disks.

I'd be obliged if you could mention the fact that MicroCare has closed in ST Applications, just in case I've forgotten to write to anyone about it.

Paul Bocij

**FORUM**

DESKTOP DISCUSSIONS

Was 1992 a good year for the ST? Not particularly, says William Hern, but there are signs of hope for the future.

Looking back over 1992, the phrase 'new beginnings' pretty well sums up Atari's year. With sales of the ST falling, and software houses going elsewhere in their search for profits, the company's launch of the Falcon was not before time. OK - you couldn't actually get one in 1992 unless you were a key developer but just the news of the machine's specifications produced levels of excitement not seen since the the release of the original ST back in 1985.

I won't say much about the Falcon as it has received extensive coverage elsewhere, but I am impressed. The choice of the Motorola 68030 processor is wise (especially in light of Commodore's decision to opt for the M68E0C20, a processor intended more for use in washing machines than in computers, in its latest Amiga), and the inclusion of a DSP chip should lead to some interesting products. The increase in the range of screen resolutions is very welcome although I'm disappointed that the maximum resolution is 640 by 480 without overscanning, which doesn't go very far in this age of multi-windowed, multitasking software.

My big worry though is the dearth of software development for it. I have a transcript of the GEnie interview that Sam Tramiel gave during the Comdex show in November beside me as I write this and the limited number of companies that he was able to cite as actively writing for the Falcon is all too obvious. What a contrast to seven years ago when Atari were able to boast that all the big

names - including Lotus, Word Perfect and Microsoft - were working on ST titles. OK, the products from Lotus and Microsoft never saw the light of day, but a lot of machines were shifted on the mere promise of their arrival. The first Falcon software is going to have to be hot stuff indeed in order to attract users.

Running the Falcon a close second in terms of importance is MultiTOS. While it is not without problems, for a first attempt at multitasking it is highly impressive. When compared to Apple's tentative ventures to give the Macintosh multitasking capability, MultiTOS v1 is superb, and thanks to Atari signing up Eric Smith, MiNT's creator, we should be able to look forward to better versions in the months to come. The down side, though, is that the upgrading of the public domain MiNT system must be in doubt.

Glasnost came to ST users in January with the welcome, and long overdue, commercial release of the developers' documentation. I've never understood why Atari has been so cagey about releasing comprehensive documentation about the ST as this can only hurt the quality of software development. Let's hope that the company has learnt from its mistake and that the Falcon documentation will be released to the public somewhat earlier than 1993.

My award for product of the year doesn't go to either the high profile Falcon or MultiTOS. Indeed, the winner isn't even a single product but in fact a whole family. For me, Atari's Introduction to Professional and Programming Applications series is the most impressive arrival of the year, especially as it was unexpected and its launch so low-key. All are great value for money although the

Review of the Year

Home Productivity (made up of the classy Kuma applications K-Word, K-Base and K-Spread2) and Word Processing (the even classier Calligrapher Lite) packages are especially worthwhile at £20 and £25 respectively. I hope that Atari will give the series the promotional push in 1993 that it so richly deserves.

An honorary mention goes to the SM144 monochrome monitor which must be the shortest lived Atari peripheral in history. Less than nine months after release, supplies of the SM144 dried up, with the seemingly immortal SM124 reappearing yet again. Although the initial batch of SM144 had screen problems, later models suffered no such afflictions and with their larger screen and better controls, were definitely an improvement over the SM124/125s.

An almost equally short-lived product was the Mega STE. The first victim of the newly dawed Falcon era, the Mega STE was a quality machine but it came too late into a market that was already packed with cheap PC clones and Macintoshes, and so few were sold. Had Atari spotted the sales potential of a faster ST sooner and released the Mega STE two years earlier the story might have been different.

On the subject of farewells, an old friend of this column, Allan Pratt, quit Atari this year to join the Apple/IBM joint venture Taligent. Allan will be remembered by many for his valuable contributions to the Usenet ST bulletin boards and also for porting software such as RCS to the ST. Allan was an early proponent of MiNT within Atari and played an important role in getting it adopted as the multitasking core for MultiTOS. I'm sorry to see Allan go but

wish him every success with Taligent.

1992 also saw the closing of the South West Software library, one of the oldest and most respected of the public domain software suppliers. SWSI's owner Martin Dryden cited the raid by Trading Standards officials over alleged breaches of copyright as the reason for quitting. I don't think that he will be the last PD proprietor forced to withdraw from business owing to copyright problems. As the graphic and audio power of computers improves, the gap in quality between computerised music and that on more traditional forms of media will close completely. With the Falcon's promise of true colour graphics and CD quality sound, PD vendors had better consider every addition to their demo and music collections very carefully.

Rounding Off

One of the most unexpected events of the year was the sacking of Alwin Stumpf, the head of Atari Germany, and one of the original Tramiel-led defectors from Commodore. Strangely enough, just weeks before ST Format magazine had named him in their list of the ten most influential men in the ST industry. Was the ST Format list the kiss of death for him? Are the other nine in the list now likely to befall similar fates? ST Format may be wondering that themselves as they modestly included themselves at number six. So, please, try to give ST Format all the support you can through 1993 as they try desperately to save themselves from their own curse. That said, the title "ST Applications (incorporating ST Format)" does have a certain ring to it...

Programmers' Forum

In this month's edition of ST Applications' regular programming column, we investigate two routes to producing a 'MIDI-thru' program, and glance at a simple line-drawing technique used by many art packages.

MIDI through-port

Kicking off this month's column, a question about the ST's MIDI ports. One of the more annoying pieces of penny-pinching design in the ST is the omission of a conventional MIDI through-port. Although the 'MIDI-thru' function is provided, it uses the same DIN socket as 'MIDI-out'. For the price of a 5 pin DIN socket, Atari deprived the ST of a complete MIDI implementation.

It should be easy enough to circumvent this problem with a small hardware add-on: see Figure 1. However, Andrew South from Rugby would like a software solution:

A few months ago I splashed out on Lattice C and started to learn the language... I could ask a thousand questions, but will limit myself to one. I managed finally to find my way round most problems, but one which has defeated me for some time is how to harness MIDI interrupts. I want to implement a transparent software 'MIDI-thru', and can find no information on how to do it. Any help that your column can give would be most appreciated - ideally in C and/or assembler.

To provide a MIDI through-port, we simply have to write a program that catches all bytes arriving at the MIDI input port and copies them to the MIDI output port. Note that this is not identical to a proper hardware through-port as there will be a short delay between the arrival of a MIDI byte and its retransmission.

Listing 1 shows how a through-port can be emulated using a short assembly-language routine. The program is made up of two sections. The first of these is a simple installation routine which reroutes the MIDI input vector, then terminates leaving the whole program resident.

The heart of the program is the new MIDI input vector handler. This routine is prefixed by an XBRA header block. This structure should be familiar to most *Programmers' Forum* readers by now, but newcomers can find more details in the STA11 edition of the column. When a byte arrives at the MIDI input port, the handler is called in supervisor mode with the byte in d0. The routine checks that the MIDI output channel (part of the MIDI communications chip, a 6850 ACIA - see the Box for more details) is not already in use, and then sends the byte to the MIDI output port. If the output port is in use, the routine waits until it is free before sending the byte. The routine terminates by passing the byte on to the system MIDI input handler which stores the byte in a small buffer. MIDI data in this buffer can be read using the BIOS Bconstat() function with a device number of 3.

An alternative solution

Stimulated by Mathew Lodge's MultiTOS article in STA 22, K J Wood of Crawley has written in with a similar program based on MiNT, the multitasking OS that forms the kernel of MultiTOS:

The forthcoming Atari Falcon machine will be multitasking. The ST Club disk UTI.147 contains the original version of the Falcon's multitasking operating system extension, now known as MultiTOS but originally called MiNT.

The UTI.147 disk can be used to start writing programs for the Falcon immediately without waiting for the Falcon to appear in the shops or (more likely) for cash to appear in your bank account. What's more, your present machine can enjoy the real benefits of multitasking now.

The MiNT disk assumes that you will be

using the excellent GNU C compiler, although any good C compiler will do since all that is involved is using a header file "minibind.h" instead of the usual "osbind.h". GNU C is available from the ST Club on disks LAN.53/54/55/56 for around a fiver; you will need 2 or 2.5MB of RAM and a hard disk, though.

I have a MIDI keyboard connected to the MIDI-IN port of my ST and a MIDI sound module connected to the MIDI-OUT port, and I wanted to pass MIDI signals through the ST at the same time as doing something else on the ST. For example, it takes 5 to 10 minutes to compile and link huge C programs during which time I like to doodle on the MIDI setup. Without multitasking this would be impossible, but with MIDITHRU running in the background I can play away while the ST slaves away compiling and linking.

MIDITHRU is a small and simple program. It would be smaller if I had not added an option to increase the volume (velocity) by 50% on channels 2 through 9 (my sound module) to give some extra 'oomph'. I wrote a desk accessory to do the same job and it was most cumbersome to code and only worked with GEM programs.

Mr Woods' MIDITHRU program is presented as Listing 2. The program operates on a different principle from Listing 1. Incoming MIDI data is gathered by the normal BIOS routine, and placed into the system buffer. Periodically, the MiNT kernel activates MIDITHRU which then checks the buffer using the Bconstat() function to see if a character has arrived. If so, it is copied to the MIDI output using Bconout(). A minimal MIDI-through function could thus be implemented under MiNT in a few lines:

```
#define MIDI 3
void main(void)
{
    while (TRUE)
    {
        if (Bconstat(MIDI))
            Bconout(MIDI, Bconin(MIDI));
        Syield();
    }
}
```

Syield() is a MiNT function which gives the kernel a chance to execute other processes. Please note that these programs rely on the presence of the MiNT system. If you do not use MiNT, you will have to use a program like Listing 1 to obtain a background MIDI through function.

The remainder of the code in Listing 2 is concerned with supporting the extra bells and whistles particular to Mr Wood's MIDI setup. Readers who are unfamiliar with some of the more obscure constructions in C may be confused by line 82. This defines a temporary integer variable 'v' which exists only between the curly brackets on line 81 and line 90, and gives it the value of the expression 'c & 0x7F'. Textbooks would say that the scope of this variable is restricted to the block in which it is declared. In fact, C allows such local variables to be declared after any opening curly

bracket. The facility should be used with care, as it often does little to make programs easy to read.

Drawing lines

On a completely different track, G A Cox from Birmingham writes about a small problem with a graphics program he is writing:

I am writing an art program using Highspeed Pascal and would like to know how to draw a line on the screen using the rubber-banding method. This technique is used in DEGAS and many other art programs. I have a working knowledge of the C language, and also Modula 2 and GFA BASIC, so a short listing in any of these would suffice.

This is a fairly straightforward task. A short C program illustrating the technique appears as Listing 3. After the normal GEM preamble, the program clears the screen to white, and changes the mouse pointer shape to make a cross-hair drawing cursor. The rubber_lines() function handles the mouse interaction by waiting for a left click to set the anchored point, and then tracking the mouse around the screen until a second click fixes the end of the line. Lines are drawn and erased using the exclusive-OR drawing mode set by vswr_mode(). To escape from the drawing screen, click the mouse button while holding down one of the Shift, Alternate or Control keys.

Porting to other compiler and assembler systems

This month's listings are straightforward and should port onto other compiler/assembler systems without major problems. Listing 2 was written for the GNU C system, but compiles without problems under Lattice C v5.2.

Next month

Next month, *Programmers' Forum* will print more questions and tips from readers' letters. Keep the letters coming in - the more we receive, the better the column gets! Hints on any subjects, or questions about programming problems should be sent to the address below. All contributions, no matter how simple or advanced, are most welcome. Please include your address on the letter, so I can get back to you if anything in your contribution is unclear. E-mail addresses are useful too.

Please send a disk (or email) if there are large chunks of text or ASCII source code: I have no time to retype lots of material. Naturally, disks will be returned if an SAE is included.

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The Hardware Interface

For those readers who are interested in the hardware of the MIDI port, the following information may prove useful.

The ST contains two Motorola 6850 ACIA chips which are used to provide simple serial communications between the 68000 and the outside world. One ACIA, running at the MIDI standard transfer rate of 31250 baud controls the MIDI ports. The other is used to communicate with the keyboard processor at a data transfer rate of 7812.5 baud.

These peripheral chips are accessible to the programmer at two levels. To simply write a block of data out through the MIDI or keyboard ports, it is best to use the facilities provided by the XBIOS in the form of the Ibkdw() and Midisw() functions. The following program fragment shows how these functions are used:

```

XBIOS    equ      14
Midisw   equ      12
Ibkdw   equ      25

pea      data_blk           ;Address of block
move.w  #data_end-data_blk-1,-(sp) ;Length of block-1
move.w  #Midisw,-(sp)
trap    #XBIOS
addq.l  #8,sp

data_blk dc.b    <put your MIDI data here>
data_end equ     *

```

Of course, it's the programmer's responsibility to make sure that the bytes in the data block form correct MIDI or keyboard messages. Individual bytes can be read and sent through the ports using the standard BIOS character I/O functions (Bconin, Bconout, Bconstat and Bcostat). The MIDI port device number is 3, the keyboard port number is 4.

To control the operation of the ports more precisely, it is necessary to directly program the ACIA hardware. Each chip has four internal registers: two which are read-only (Status and Receive_Data) and two which are write-only (Control and Transmit_Data). These are mapped to two locations in the ST's memory as follows:

Chip	Location	Read	Write
Keyboard ACIA	\$FFFC00	Status	Transmit_Data
	\$FFFC02	Receive_Data	Control
MIDI ACIA	\$FFFC04	Status	Transmit_Data
	\$FFFC06	Receive_Data	Control

To transmit a character, we simply write the byte into the Transmit_Data register. Incoming bytes appear in the Receive_Data register. For the purposes of MIDI and keyboard communication, we can ignore the Control register and all except three bits of the Status register. Bit 0 of the Status register is set to 1 when a character has been received. Bit 1 is set when the Transmit_Data register is ready to accept another data byte. Bit 7 is set when the ACIA has caused a 68000 interrupt. This happens when a character has been received, or when an error condition arises. The other bits in the status register are used to signal the occurrence of various error conditions.

Both ACIAs feed into the MFP interrupt handler at level 5 (see *Programmers' Forum* in STA4 and STA6 for more details of the interrupt system). The BIOS interrupt handler determines which ACIA has generated the interrupt by testing bit 7 of each Status register. The other bits of the status register are then tested to determine the reason for the interrupt (character received, serial error, etc.). An appropriate handling routine is selected from a table of vectors and invoked. This vector table is accessible to the programmer using the XBIOS function Kbdvbase() (code 34).



Figure 1

Possible design for split MIDI lead to separate MIDI Out and Thru functions from the single ST output socket. Numbers refer to DIN plug/socket pins. Suitable connectors can be obtained from Maplin: 5 pin, 180 degree DIN plug HH27E; 5 pin 180 degree DIN line socket HH43W.

```

/*
** Listing 1.
** Programmers' Forum STA 26
**
** Brief program to attempt to create a transparent
** MIDI-thru function for the ST.
**
** Assembler system: Lattice asm v5.06
** Written on 17th February 1992
**
**
** Define some symbols...
**

MIDI_control    equ      $FFFFC04
MIDI_data       equ      $FFFFC06

GEMDOS \        equ      1
Ptermres        equ      $31

XBIOS           equ      14
Kbdvbase        equ      34

CSECT      TEXT,0

start    move.w  #Kbdvbase,-(sp)    Find the keyboard vector table
        trap    #XBIOS
        addq.l  #2,sp
        move.l  d0,a0      Copy pointer for use.
        move.l  (a0),oldvec   Take copy of the current MIDI vector.
        move.l  #handler,(a0)  Insert our handler in its place.
        clr.w   -(sp)      Return code for the program: OK.
        pea     finish-start+$100  Program length + basepage length.
        move.w  #Ptermres,-(sp)
        trap    #GEMDOS      Return and stay resident.
        illegal      Should never happen...

**
** The new handler for the MIDI input vector. It
** is called after processing of the combined
** keyboard/MIDI interrupt, with the newly arrived
** character in d0. The character is written out
** to the MIDI output, and then the old handler is
** called to write it into the input buffer.
**

        ds.l   'XBRA'      XBRA header for the handler.
        dc.l   'THRU'       Name of this product.
oldvec   dc.l   0          Space to store old vector.

handler  move.l  a0,-(sp)    Preserve the registers we use.
        lea     MIDI_control,a0  Address the control register.
        btst.b #1,(a0)      Is the Tx register empty ?
        beq.s   1$           No, wait until it is.
        move.b d0,2(a0)      Then write the byte out.
        move.l  (sp)+,a0      Recover the register.
        move.l  oldvec,-(sp)  Jump on to existing handler.
        rts

finish   equ     *          End marker for length of program.

        END

/*
** Listing 2.
** Programmers' Forum STA 26 (February 1993)
**
** MIDITHRU - an example of multitasking using MiNT
** written by K J Woods.
**
** Compiler system: GNU C
**
** Also compiles under Lattice C v5.52:
** Compile options: -cargfku
** Meaning: Enable ANSI mode, disable trigraphs, enable
**           non-ANSI keywords, assume unsigned chars
*/
#include <mintbind.h>

#ifndef FALSE
#define FALSE 0
#define TRUE (!FALSE)
#endif

#define MIDI 3

#define STATUS 0x80
#define NOTE_ON 0x90

int _stksize = 1024L;

void main (void)
{
    int note_on = 0;
    int channel = 0;
    long c;

    while (TRUE)
    {
        if (!Bconstat(MIDI))
            Syield(); /* Speed MiNT multitasking */
        else
        {
            c = Bconin(MIDI);
            Bconout(MIDI,c);
            if ((c & STATUS) == STATUS)
            {
                if ((c & NOTE_ON) == NOTE_ON)
                {
                    note_on = TRUE;
                    channel = 1 + (c & 0xF); /* Number channels 1 to 16 */
                }
            }
            else
            {
                note_on = FALSE;
                channel = 0; /* Make channel invalid */
            }
            if (!Bconstat(MIDI))
                Syield();
            else
            {
                c = Bconin(MIDI);
                Bconout (MIDI,c);
            }
            if (note_on) /* Note-on velocity byte */
            {
                if (!Bconstat(MIDI))
                    Syield();
                else
                {
                    c = Bconin(MIDI);
                    if (2<=channel && channel<=9) /* Roland CM32L */
                    {
                        if ((c & 0x7F) > 0) /* Preserve pseudo-note-offs */
                        {
                            int v = c & 0x7F; /* LINE 82 - see text */
                            v *= 3;
                            v /= 2;
                            if (v > 0x7F)
                                v = 0x7F;
                            c ^= 0x7F;
                            c |= v;
                        }
                    }
                    Bconout (MIDI,c);
                }
            }
        }
    }
}

```

```

** Listing 3.
** Programmers' Forum STA 26 (February 1993)
**
** Small program to demonstrate how to draw tethered
** lines on the screen, a technique used by many art
** programs.
**
** Compiler system: Lattice C v5.51
** Compile options: Phase 1: -cargfku Phase 2: -ms
** Meaning: Enable ANSI mode, disable trigraphs, enable
** non-ANSI keywords, assume unsigned chars
** Link with C.O, LCG.LIB and LC.LIB
** Written on 15th March 1992
*/

```

```

#include <aes.h>
#include <portab.h>
#include <vdi.h>

/*
** Function prototypes...
*/

```

```

int get_click(short *,short *,short *);
int main(int, char **, char **);
void rubber_lines(void);

/*
** Global variables...
*/

```

```

short work_out[57]; /* Virtual workstation description */
short screen[4]; /* Coordinates of screen corners */
short handle; /* VDI virtual workstation handle */
short ap_id; /* AES application identifier */

```

```

/*
** The program starts here...
*/

```

```

int main(argc,argv,envp)
int argc;
char **argv, **envp;
{
    int f;
    short dummy;
    short work_in[11];

    if ((ap_id = appl_init()) == -1)
        return (0);
    for (f=0; f<10; f++)
        work_in[f] = 1;
    work_in[10] = 2;
    handle = graf_handle(&dummy,&dummy,&dummy,&dummy);
    v_opnvwk(work_in,&handle,work_out);

    wind_update(BEG_MCTRL); /* Delete if using menu bar */
    screen[2] = work_out[0];
    screen[3] = work_out[1];
    graf_mouse(M_OFF,NULL);
    vsf_color(handle,WHITE);
    vsf_interior(handle,FIS_SOLID);
    vsl_color(handle,BLACK);
    v_bar(handle,screen);
    graf_mouse(THIN_CROSS,NULL);
    graf_mouse(M_ON,NULL);
    vswr_mode(handle,MD_XOR);
    rubber_lines();
    wind_update(END_MCTRL); /* Delete if using menu bar */

    v_clsvwk(handle);
    appl_exit();
    return (0);
}

```

```

/*
** Function to handle drawing of a line on the screen
** using the rubber-band method as used by DEGAS etc.
** There are no arguments and no return values.
**
** Usage: void rubber_lines(void);
*/

```

```

void rubber_lines(void)
{
    short current[4];
    short old[4];
    short button, key, undrawn;

    while (TRUE)
    {
        if (get_click(&current[0],&current[1],&button) == FALSE)
            return;
        old[0] = current[0];
        old[1] = current[1];
        undrawn = TRUE;
        while (TRUE)
        {
            graf_mkstate(&current[2],&current[3],&button,&key);
            if (button != 0)
                break;
            if (key != 0)
                return;
            if (current[2] != old[2] || current[3] != old[3])
            {
                graf_mouse(M_OFF,NULL);
                if (undrawn == FALSE)
                    v_pline(handle,2,old);
                else undrawn = FALSE;
                v_pline(handle,2,current);
                graf_mouse(M_ON,NULL);
                old[2] = current[2];
                old[3] = current[3];
            }
        }
        if (button == 0x02)
        {
            graf_mouse(M_OFF,NULL);
            v_pline(handle,2,current);
            graf_mouse(M_ON,NULL);
        }
        evnt_button(1,1,0,&current[2],&current[3],&button,&key);
        if (key != 0)
            return;
    }
}

/*
** Function to wait for a left-button mouse click
** to set the ball rolling. The arguments are
** pointers to variables into which to write
** the position of the mouse at the time of the
** button click, and the button state. The
** return value is TRUE if the drawing is to continue,
** or FALSE if not (the user pressed any of the
** Shift/Control/Alt keys while clicking).
**
** Usage: quit = get_click(x,y,button);
**
**      int quit, get_click(short *,short *,short *);
*/

```

```

int get_click(x,y,button)
short *x, *y, *button;
{
    short key;

    evnt_button(1,1,1,x,y,button,&key);
    if (key != 0)
        return(FALSE);
    evnt_button(1,1,0,x,y,button,&key);
    return(key == 0 ? TRUE : FALSE);
}

```

Programming

```

' Listing 3.2
'-----OBJECT UTILITIES-----
' (requires DEFINT a-z and LIBRARY "gemaes" in main program)

'offsets in bytes for OBJECT structure
CONST ob_next=0,ob_head=2,ob_tail=4,ob_type=6,ob_flags=8,ob_state=10
CONST ob_spec=12,ob_x=16,ob_y=18,ob_width=20,ob_height=22,ob_sizeof=24

'useful AES constants
CONST type_tree=0,type_object=1,type_string=5
CONST SELECTED=1,SELECTABLE=1,DISABLED=8
CONST G_BUTTON=26

' function to get object address
DEF FNobject&(tree&,object)=tree&+object*ob_sizeof

' functions to read attributes
DEF FNobj_x(t&,num)=PEEKW(FNobject&(t&,num)+ob_x)
DEF FNobj_y(t&,num)=PEEKW(FNobject&(t&,num)+ob_y)
DEF FNobj_width(t&,num)=PEEKW(FNobject&(t&,num)+ob_width)
DEF FNobj_height(t&,num)=PEEKW(FNobject&(t&,num)+ob_height)
DEF FNobj_type(t&,num)=PEEKW(FNobject&(t&,num)+ob_type) AND &hFF
DEF FNobj_spec&(t&,num)=PEEKL(FNobject&(t&,num)+ob_spec)
DEF FNobj_flags(t&,num)=PEEKW(FNobject&(t&,num)+ob_flags)
DEF FNobj_state(t&,num)=PEEKW(FNobject&(t&,num)+ob_state)

'sub-programs to set attributes
SUB OBJ_X(VAL d&,VAL num,VAL x)
    POKEW FNobject&(d&,num)+ob_x,x
END SUB

SUB OBJ_Y(VAL d&,VAL num,VAL y)
    POKEW FNobject&(d&,num)+ob_y,y
END SUB

SUB OBJ_WIDTH(VAL d&,VAL num,VAL w)
    POKEW FNobject&(d&,num)+ob_width,w
END SUB

SUB OBJ_HEIGHT(VAL d&,VAL num,VAL h)
    POKEW FNobject&(d&,num)+ob_height,h
END SUB

SUB DEBUG(VAL s$)
LOCAL junk
    junk=FNform_alert(1,"[1] [" + s$ + "] [OK]")
END SUB

' supplementary OBJC_routines

SUB OBJC_SMARTDRAW(VAL tree&,VAL obj,VAL depth)
LOCAL x,y,junk
    junk=FNobjc_offset(tree&,obj,x,y)
    junk=FNobjc_draw(tree&,obj,depth,x,y,_
        FNobj_width(tree&,obj),FNobj_height(tree&,obj) )
END SUB

SUB OBJC_NEUSTATE(VAL tree&, VAL obj, VAL mask, VAL value, VAL drawflag)
LOCAL v,x,y,junk
    junk=FNobjc_offset(tree&,obj,x,y)
    v=(FNobj_state(tree&,obj) AND mask) OR value
    junk=FNobjc_change(tree&,obj,x,y,FNobj_width(tree&,obj),_
        FNobj_height(tree&,obj),v,drawflag)
END SUB

' Listing 3.3
' example program showing pop-up menus
DEFINT a-z
LIBRARY "gemaes"

' 10 Leave, variable checks on
REM $OPTION L10,V+,U+
REM $INCLUDE OBJECT.BH

' get the resource header file (for POPUP1/MQUIT)
REM $INCLUDE POPUP.BH

CONST WF_WORKXYWH=4

' global variables

```

```

DIM SHARED junk
DIM SHARED screenx,screeny,screenw,screenh

' main program
IF FNrsrc_load("POPUP.RSC")=0 THEN
    junk=FNform_alert(1,"[3][Resource file error][ Quit ]")
    SYSTEM
END IF
graf_mouse 0,0
' get usable screen area
junk=FNwind_get(0,WF_WORKXYWH,screenx,screeny,screenw,screenh)
TEST_PROGRAM
junk=FNrsrc_free
SYSTEM

' the main loop - popup on double-clicks
' end when Quit item is chosen
SUB TEST_PROGRAM
LOCAL mess(7),clicks,x,y,b,k,popobj
popobj=0
DO
    clicks=FNevnt_button(2,1,x,y,b,k)
    IF (clicks=2) AND (b<>0) THEN
        popobj=FNPopUp(POPUP1,x,y,popobj)
    END IF
LOOP UNTIL popobj=MQUIT
END SUB

' returns item number of selection, or 0 if none
DEF FNPopUp(tnum,x,y,startobj)
LOCAL tree&,obj,popped,cx,cy,button,current
popped=0: current=0
junk=FNrsrc_gaddr(TYPE_TREE,tnum,tree&)
cx=x: cy=y
IF startobj THEN
    cx=x-FNobj_x(tree&,startobj)-FNobj_width(tree&,startobj)\2
    cy=y-FNobj_y(tree&,startobj)-FNobj_height(tree&,startobj)\2
ELSE
    cx=x-FNobj_width(tree&,0)\2
    cy=y-FNobj_height(tree&,0)\2
END IF
IF cx+FNobj_width(tree&,0)>screenw+screenx THEN
    cx=screenw+screenx-FNobj_width(tree&,0)
END IF
IF cy+FNobj_height(tree&,0)>screenh+screeny THEN
    cy=screenh+screeny-FNobj_height(tree&,0)
END IF
IF cx<screenx THEN cx=screenx
IF cy<screeny THEN cy=screeny

OBJ_X tree&,0,cx: OBJ_Y tree&,0,cy

' (save screen area here)
junk=FNobjc_draw(tree&,0,1,screenx,screeny,screenw,screenh)
DO
    junk=FNevnt_button(1,0,0,cx,cy,button,0)
    IF button THEN
        obj=FNobjc_find(tree&,0,1,cx,cy)
        IF obj=-1 THEN
            obj=0
        ELSE
            IF ((FNobj_flags(tree&,obj) AND SELECTABLE)=0) OR _(
                FNobj_state(tree&,obj) AND DISABLED) THEN
                obj=0
            END IF
        END IF
        IF obj<>current THEN
            IF current THEN OBJC_NEUSTATE tree&,current,NOT SELECTED,0,1
            current=obj
            IF current THEN OBJC_NEUSTATE tree&,obj,-1,SELECTED,1
        END IF
        ELSE
            popped=1
        END IF
    END IF
LOOP UNTIL popped
' (restore screen area here)
FNPopUp=current
IF current THEN OBJC_NEUSTATE tree&,current,NOT SELECTED,0,0
END DEF

```

CAD Column

Designers are moving rapidly towards the paper-less office but will there be a place for Ataris? Joe Connor ventures where no Atari has gone before.

It's happening already: designers are increasingly making use of vector graphics based art packages to produce finished full colour presentation drawings without pen touching paper. Currently there is not a single Atari colour vector drawing package available. The Falcon's integral keyboard apparently contravenes new Euro office regulations, and so we are unlikely to see any change in this situation before a Falcon 040 featuring a detachable keyboard comes along. Increasingly my trusty Atari is left idle as the finished CAD drawings are exported to applications such as Professional Draw (on the PC) or Aldus Freehand (on the Mac). The hardest part is getting them there!

Most vector packages claim to load a whole basket of vector file formats including DXF, GEM Metafiles, Postscript and HPGL. Getting the information from the CAD package successfully into one of these Art packages is two parts voodoo, one part black magic. The problems divide into two categories:

a) Exchange between CAD applications.

Most of the problems of exchanging files between CAD packages is caused because authors tend to implement partial or mis-interpreted versions of the adopted standard. Many of these problems can be circumvented or solved using a text editor.

b) Exchange of vector files between CAD and Art applications.

Conversion to Art packages suffers from all the possible problems discussed in (a) above, and adds the second tricky problem of path and group interpretation. Vector art applications generate filled vector objects. The paths and direction they were drawn determine their final appearance.

Because CAD applications generally do not handle filled objects most files imported into Art applications require the individual elements to be stitched back together. The degree of success seems largely unpredictable.

DXF Files

Divergence between different DXF implementations is legendary. Autodesk, the authors, produce AutoCAD and infuriatingly keep expanding the standard to suit their latest release. This causes most of the incompatibility problems. Some common limitations are:

Grouping: drawing elements in some applications can be grouped together and is frequently lost during translation.

Layer information: loss of individual layer information, which becomes merged onto a single layer.

Pen Style/Colour information: lines styles become confused or all default to solid line-style.

Dimensions: usually grouped as a single element, often become ungrouped, suffer text formatting or simply will not convert.

Text: many applications ignore or cannot handle text height and width values with disastrous consequences.

Accuracy: during conversion coordinates are truncated to a fixed number of decimal places. Any loss is bad news, so the more decimal places supported the better.

If all this wasn't bad enough, DXF files genera-

ted by one application may well be completely rejected by another. AutoCAD is particularly pedantic about which DXF files it will convert with even the most minor divergence from the latest standard aborting the conversion.

Because DXF and Postscript files consist of ASCII text, files can be edited using an editor such as Tempus. Using a good reference source or even by comparing files many problems can be solved. For example, DynaCADD adds a 'NaN' label to elements it cannot understand. AutoCAD rejects the whole drawing because of this. A simple block delete operation in Tempus sorts it out.

A0 PostScript Output for all

Postscript files

Not many Atari CAD applications support Postscript directly (DynaCADD being the notable exception) which is a pity because it is the most widely used format by bureaux services and can be imported into many Applications. Recognising the advantages of Postscript output John K Eason has produced a Postscript converter for CADja ASC files.

You haven't got CADja eh? Remember MiniDraft, reviewed in STA 22 and 24? Well, that can import and export CADja ASC files.

Pardon, you haven't got a Postscript laser either? Well, use a Postscript Interpreter such as CompoScript.

Can't afford that either, eh? You are being awkward! Use GhostScript reviewed in STA 23 which enables Postscript output to a wide range of dot matrix, inkjet and laser printers. (I've finally got it working with the Atari SLM804, in case you were wondering.)

CADja2PS

After selecting a CADja format ASCII file it is scanned into memory and CADja2PS presents a dialog box shown below.

CADja supports up to 32 levels and all levels containing drawing elements are indicated black. Levels can be turned on and off as desired.

The available Postscript export options are:

Line ends; a graphic pop-up menu appears offering butted, overlapped or rounded line endstyles.

Tiling; the unregistered version is restricted to single A4 output. Registered users can activate a graphic pop-up displaying the individual A4 tile boundaries necessary to make up the full size drawing. Tiles can be turned on or off for output as desired. The final drawing is pasted together after trimming to the integral boundary markers, brilliant! An A0 drawing comprises 18 A4 Tiles.

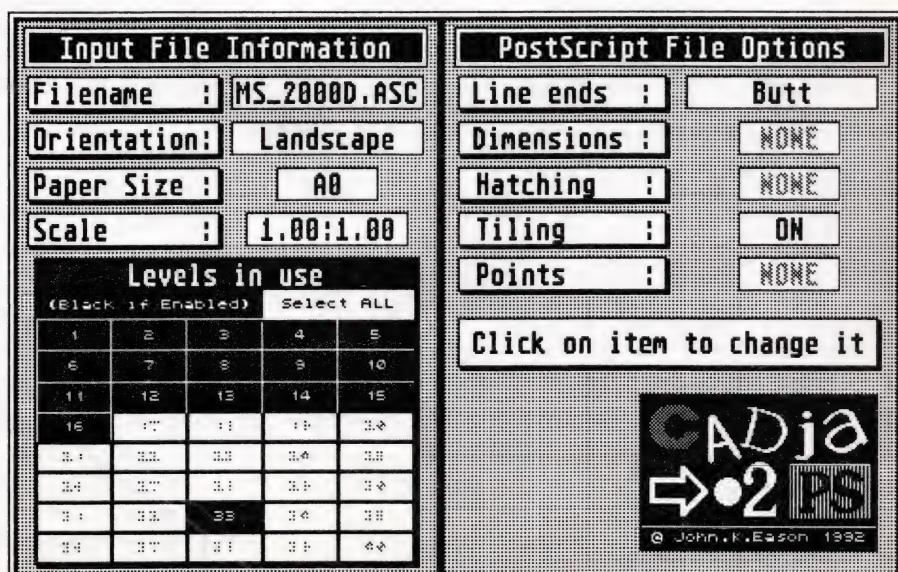
After the desired options are selected the Postscript file is generated.

Postscript files output from CADja2PS are optimised for output speed, and support for the 68881 maths coprocessor speeds up conversion by up to 40%. A complex A0 drawing made up of 18 A4 sheets was output to my Atari SLM804 running CompoScript in 20 minutes!

CADja2PS is compatible with UltraScript on a SLM804 and GhostScript V2.41 and V2.52 (PD) and CompoScript enabling Postscript files to be output to a wide range of dot matrix, inkjet and laser printers.

The Release PD version will be available from the ST Club and CIX. In the meantime you can obtain a Registered Version for £8.00 direct from the Author:

John K Eason, Flat 4, 119 Brighton Road, Sutton, Surrey SM5 2SN.



For Sale

Megapaint II mono drawing package - £45, Quick ST 3 - £10, Flair Paint - £10, manual for Harlekin 1 (As seen on cover disks) - £5, Wordflair 1 - £25. Call Frank on (0279) 434168 (Home) or (0438) 782551 (work). (28)

Mark Williams C Compiler £25, Hisoft C Interpreter £10, K Resource 2 £10, First Word Plus V3.14 £25, Timeworks Desktop Publisher £25, ST BASIC Revised Edition £5, Borodino £6, Sub Logic Flight Simulator II with Scenery disks 7, 11 and 14 - £30, C Breeze (C Editor) £8, Fun School 2 Ages 6-8 - £10, Over 8 - £10. Phone (0344) 885609 (Ascot, Berkshire). (28)

Atari STE 4MB - Ext 1MB Floppy - 52MB Quantum Data Pulse ICD Card HD. (Under 1 year old.) Multisync Monitor (Screen slightly burned-in). Loads of software. £580 ono for quick sale - will split. Buyer collects/pays postage - 0473 601380. (26)

Mega 1 ST, SM124 Monitor, Vortex HD Plus 40, Star NL 10 9-pin Printer, £560. All items unmarked and in perfect working condition, may split, must be bargain of the year. Microsoft Write - Word Writer - Swift Calc - VIP Professional - Super Base Personal £15 each, Degas Elite £10, SBA Cash £25. Tel: 0422-204199 anytime. (27)

SLM 804 Laser Printer for sale, in excellent condition and with plenty of drum life remaining, this can be yours for £280, includes the usual GDOS driver and fonts along with Diablo and Epson FX emulators, and I will throw in free your choice of Script or WordUp word processors along with extra font disk(s). You must arrange collection of this heavy printer, which must be transported with an empty toner hopper (new toner cartridge will be provided). Derryck 0923 673719 (Watford). (27)

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Please use the form on page 58.

Timeworks Publisher 2, Timeworks Desktop Publisher User Guide, Fontkit Plus 3.4, PD Fonts - all for £75. - Phone Hugh on 08444-5655 (Home) or 071-410-3734 (work). (26)

1040 STF w/1Mb Ram, 720K Internal floppy, SM125 Mono Monitor, 720K External floppy, PC Speed, Mark Williams C Compiler, and CSD Source Debugger, Swiftcalc, Degas Elite, Easytext Plus, Lots of PD shareware - Over 50Mb in all. £400 ono. Contact Kevin 0786-825406 (Scotland). (26)

Blackthorne Printer interface for Atari 800/XL/SE users, connects to any Parallel Centronics Printer Epson, Star, Cannon, etc., as new cost £79, quick sale £30+PP - also Basic XL cartridge with full manual, was £72, sell £25+PP, this is a must for serious programmers. Ring Les 021-783-5807. (27)

UFO Disk Issue 2 now includes versions in Hypertext and Timeworks formats plus scanned Photographs. Send SAE + 3.5" disk to Steve Gunn, 16

Leverton Green, Clifton Estate, Nottingham NG11 8BS. (27)

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Power Basic 1.31 £12. Habawriter III (multipotent W.P) £8. Mini Office Comms (shrink-wrapped) £8. 0273 502053 (Brighton). (27)

Atari bits: EVSI Synth £130, SC1224 Colour Monitor £130, Casio CZ1000 with stand £100, Gravis Mousestick £50, Cumania External Drive £40, and more. Call Steve on 081-53901701 for details. (27)

Write On - Complete program with manual and special DesJet 500 printer disk, £15.00. Fontkit Plus v3.2 and C-Font £12.00. 0737 813611 (day) or 0737 350784 (evenings). (26)

Amstrad SM2400 Modem, in carton with cables and manual, barely used, absolutely as new - with registered copy of FZDSTERM terminal software (the best on the ST): £85. Tim Cruise 0457 872221. (27)

Casio FZ sample disks: huge library of quality sounds. Also soundpatches for most major synths (M1, D110, SY77, K4, etc.); swaps or sale. Sample CD's wanted. Ring for details: Andy, 0532 430177. (28)

Atari SC1435 colour monitor £150. Phone Fred on 081 809 6852 evenings. (27)

Atari SC1224 colour monitor, vgc, £75 plus delivery or buyer collects. No offers. 0257 272119. (27)

ST original software: Daley Thompson, Rocket Ranger, K.O.2 - Winning Tactics, North and South, only £3 each.

Sandon School, Molram's lane, Great Baddow, Chelmsford, Essex, CM2 7AQ. Cheques should be made out to 'Sandon School'.

Genealogy

Newgen, my genealogy program, runs on any ST(E) or TT and is easy to use; it will print family trees, etc. Send large SAE for details or £17 for program. E G Richards, 2 Peckarmans Wood, London SE26 6RX.

Educational Adventures

For ages 5-13. 88% in ST Format. £12 each. 50p per disk for demo's. CVS, 18 Nelson Close, Teignmouth, TQ13 9NH. Tel: (0626) 779695.

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Selectable letter/number groups, thinking time, note pitch, morse generation from keyboard for CQ; plus save to disk, etc. Instruction manual and disk and SAE for more details. R. L. Tuft, 62 Admirals Court, Thirsk, North Yorks, YO7 1RR. Telephone: 0845-525082.

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Selectable letter/number groups, thinking time, note pitch, morse generation from keyboard for CQ; plus save to disk, etc. Instruction manual and disk for £7 or SAE for more details. R. L. Tuft, 62 Admirals Court, Thirsk, North Yorks, YO7 1RR. Telephone: 0845-525082

Pulser

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STEN

ST ENthusiasts disk magazine - for your copy send a disk + SAE to: Dave Mooney, 14 School Road, Morning-side, Newmains, Lanarkshire.

Syntax

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Calamus Manual

This self-tutorial guide incorporating sections on frame drawing, entering text, changing fonts and styles, importing text and images, drawing boxes and lines, loading, saving, printing, text rulers, headers and footers and page numbers. Available at £5 (including postage) from: David Waller, The

Hard Drivin'2, Killing Cloud, European Space Sim, Damocles only £5 each. Space 1889, F29 Retaliator, Flight of Intruder £8 each. Trimbase (relational database) £10. Phone John 0742 748794. (28)

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Atari STFM 1MB RAM, 720K floppy, SM125 monitor, mouse, joystick £200 ono. Teletext adaptor and Market Breaker £90; will split. 1st Word Plus £25, K-Data £20, Mictron Utilities Plus £10, Super Conductor £15, Blood Money £5. All originals with manuals. Delivery extra. Phone: 0582 715451 after 6pm. (26)

Fontkit Plus v3 £10; Golden Image brush mouse with Deluxe Paint £15; ICD Cleanup ST hard drive utility £15. Phone 0256 896879. (26)

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Still available, the following ST games, all originals with manuals: Elite, Corruption, Jinxter, Castle Master, Life and Death, Conflict Europe, Red Storm Rising. Call S. O'Connor on 081 748 5435 after 6.30pm. Each game £10. (26)

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Epson FX 1050 Printer (Fast, 9-pin, Wide Carriage), cost £600.00 + Sheet Feeder for above, cost £175.00 + Spare Ribbons + Box Fanfold: £125.00 (Buyer collects) Contact Steve (081-693-9864). Also Word Up v 2.0 (Gem) Cost £50.00: £10.00. (+ p/p). (26)

Atari 520STFM with One Meg Internal and External Drives. Mouse and many games - £175. Proflight from HiSoft, Tornado Flight Simulator, as new, boxed and unregistered £15. Monitor change over switch, Mono to Colour £6. Fast Basic, boxed. Manual and disks £10. (Berks) 0344 771591. (26)

ROM cards for Korg M1-Akira MPC 11, Valhalla Gold B101. £25 each or swap for similar. Steinberg Pro 12 extra-level sequencer + manual. £20 ono. Hyperpaint £5. Dr. T Copyist Apprentice -

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Sub-Logic Flight Simulator 2 £12. Telephone Ken on Romford (0708) 723956. (27)

Calamus 1.09N - £70, DR. T's Sample Maker Version 1.5 - £70, Atari ST Machine Code Book - £10, Multigem Multitasking Software (Works well) - £50, Aladin Macintosh Emulator - No reasonable offer refused - Tel Nial on (0269) 845826. (27)

The Astronomy Lab - Supercard 2 - That's Write v 1.21 - Degas Elite - Image Copy - Fontswitch v 3.28. All at £6 each. STOS (Game Creator) £12; Easydraw £15; Quick ST V 3.0 £8; Monitor Change-Over Box complete with Leads £12. 'Phone Pete on 0423-330578. (26)

Mega 1 ST. SM124 Monitor. Vortex 40 Mg HD. STAR NL 10 9 Pin Printer. All items unmarked and in perfect working condition. Must be the bargain of the year at £500. Microsoft Write - Wordwriter - Swift Calc - VIP Professional - Data Manager - Data Mng Professional - Super Base Personal £15 each. Degas Elite £10, Equinox SBA Cash £25. Tel: 0422-204199 any time. (26)

Atari STFM 520 plus Mouse Master £155, Philips CM8833 Colour Monitor £140, Atari SM124 Mono Monitor £70, 2nd Floppy drive £30, Daatascan Professional 400dpi Hand Scanner £60, Atari ST 3D Graphics and Atari ST M/C Language £8 each, User Guide to Timeworks DTP £5, all in original packaging. Must sell the lot as government grant run out (yep, me student) and my bank manager is out for my blood! Somebody buy it please. Phone Mark on 0582 468664, near St Albans.

Vidi-ST Digitiser, Deluxe Paint, Quantum Paint, GFA Raytrace, Tri-ATron, Canvas, STOS Compiler, Virus Killer - boxed + mags/2 games £85/£70 buyer collects. Steve 081-960-0776 (after 4).

Software - Megapaint £45, Cyber Sculpt + Studio + Control £65, Timeworks DTP v1.12 + Fontkit 3 + Fonts £35, Games - Dungeon Master, Chaos Strikes Back, Lemmings, Cadaver, Elite, Gods, Monkey Island, Elvira, Dega Vu 11, Supremacy, Stellar Crusade, Populous, Imperium, B A T, RVF Honda, Zenon 2, Fish - £5 each or £100 all games. All originals. Phone Mark on 0582 468664.

Wanted

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Spectre GCR for around £150. May consider Spectre 128 for around £100. Email to: jconnor@cix.com-pulink.co.uk. Tel/Fax: 0206 851400; 65 Mill Road, Colchester CO4 5LJ. (26)

Information/manual about using Triangle 40MB non-autobooting hard drive with STE, NeoDesk and Timeworks. I can't get them to work! If you can help contact Ian on 0895 638018 evenings.

HyperDraw or EasyDraw (vector art program). Please contact Andy on 0633 876878. (26)

Original (not budget) versions of Infocom's Hitch Hiker's Guide, Bureaucracy or Nord & Bert. Also Tenth Frame by Access. Phone Steve on 0923 265539. (26)

PC-Ditto Software to enable me to evaluate some PC software before buying a Hardware Emulator. Also can anyone who has used Compo's and Vortex's 286 16 MHz Emulators advise me which is the better. Thanks - Paul (0308) 24072 after 6pm. (26)

2400bps modem, any make. Must come with instructions and all leads. Tel: 0305 860245 any time. (26)

General

Does anyone know of any editors/librarians for the Korg Poly 800? - Steve Brown, 14 Arthur Road, Holloway, London, N7 6DR. (27)

3.5" Disks bought and sold. Atari STE bits for sale. Any general Atari queries answered. Phone Ian 0695 579106. (28)

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'Alternatives' fanzine - Quarterly. £1 per issue. Issue 9 out now (Autumn), Issue 10 out soon. Send £1 (which includes p+p) and address to Alternatives, 39

Balfour Court, Station Road, Harpenden, Herts, AL5 4XT. Writers, visionaries, artists needed. Details to the above address.

Help

Does anyone have any information on A4 flat bed scanners (greyscale or colour) suitable for use with the ST? I would appreciate make, model details, your views on accompanying software, etc. Also interested in handheld colour scanners. Write to J. Lucas, 37 Horndean Avenue, Wigston, Leics, LE18 1DP. (27)

Can anyone tell me how to print Condensed pitch FWP or ASCII text in sideways ('landscape') format, on A4 or 11" fanfold? Hollings, Flat 5, Park Court, Preston Park Avenue, Brighton, BN1 6HH, or ring 0273 502053. (27)

Does anyone who uses Superbase Pro know how to print out forms in Graphic Mode on a BJ10EX? All I get is 'Can't open printer' message. Any GDOS files, Printer Drivers or helpful advise gratefully received. Does anyone know if there's an update to V3.02 coming, and who owns the rights? - Contact Chris Good, 34a Park Parade, Leigh Park, Havant, Hants, PO9 5AD. (26)

Contacts

ST Contacts wanted, DTP, Clip Art, Write to A.J.W, 73 Baden Road, Gillingham, Kent, ME7 1QZ, England. (26)

User Groups: - Atari ST Christian User Group. Mutual support in using the ST in all aspects of Church work. Send for our Introductory Disk. Revd. Joe Clemson, 'Woodville', Redesmouth Road, Bellingham, Hexham, Northumberland NE48 2EH. (27)

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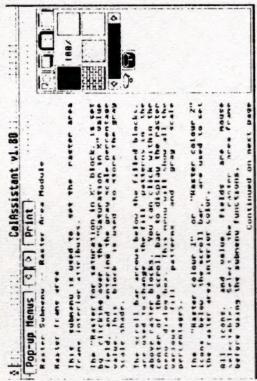
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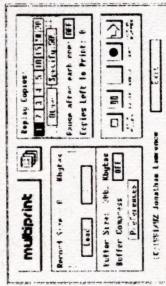
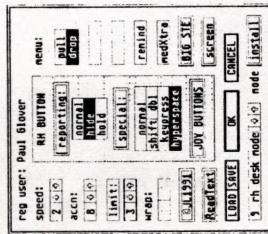


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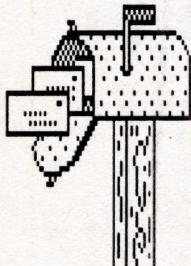
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Mouse Tricks 2
Multiprint - £9.95ea

£8.95/ set

Use this space for any feedback you'd like us to read.



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Our Service department can repair ST's in minimum time at competitive rates. We can arrange for courier pickup and return delivery of your machine to ensure it's safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day. We can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc.

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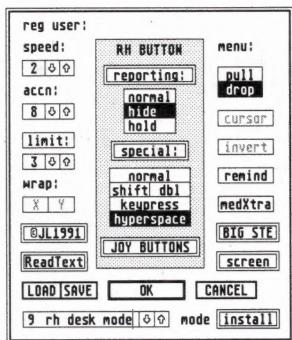
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All Star dot matrix printers include 12 months on site warranty. Add £3 for Centronics cable.

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520STE	£229
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New- 8833MKII colour monitor with Lotus challenge 2	£189.99
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Mouse Tricks 2



- Mouse Tricks combines many of the functions of existing mouse utilities in a single desk accessory and adds numerous extra functions of its own.
- Mouse Tricks can set up suitable modes of mouse behaviour for particular programs. An optional screen saver is also included.
- Mouse speed can be reduced as well as increased. This allows a cross-hair mouse add-on such as "Tracey" to trace artwork of any size.
- All the functions of Mouse Tricks can be adjusted through a set of easy to follow dialog boxes.

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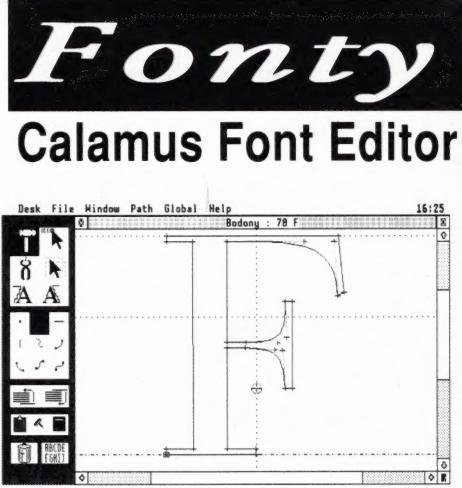
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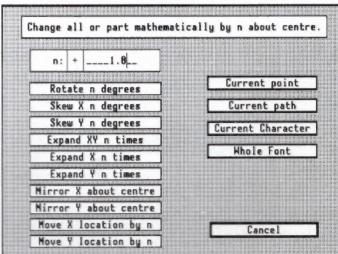
Comprehensive 70-page ring-bound manual supplied.

This is a fully featured editing program for creating and editing Calamus CFN-format font files. Also, when used in conjunction with C-Font or Fontkit Plus, CFN files created with Fonty can be used to generate sets of bit-mapped fonts for use in packages such as: K-Spread4, Degas Elite, Timeworks DTP, Calligrapher, That's Write, Redacteur 3, and Wordflair.



- As many as 20 different settings can be named and saved, and each mode can be selected via a dialog or a user selected keycode.
- Mouse Tricks keeps a list of up to 40 different programs; for each program on the list you can specify both the mode you wish to be installed when a program is run, and the maximum amount of memory initially available to that program.
- Mouse Tricks contains a text reading utility, Read Text, with which you can load, read and switch between as many as eight text files from within any program that allows access to desk accessories.
- Read Text can also be invoked by double-clicking on the desktop icon of the file you want to read, or by pressing a user defined keycode.
- Big STE is a virtual screen utility that uses the STE's video display hardware to provide instantaneous smooth scrolling around virtual large screens of any (feasible) dimensions, with the option of an interlaced display for any screens with double (or greater) the normal screen height.
- Tutorial function to help you learn to use Mouse Tricks.

Fonty features include: draw mode icons (Hammer mode, Pliers mode, Move mode, Select path mode, left and right kern mode), Grids and Guide Lines, Manual and Automatic kerning, Backgrounds for tracing (a Degas picture or a complete GEM font), a full feature Calculator to mathematically manipulate fonts, and Window scaling. A separate program, PFB2CFN, reads a Postscript Type 1 Font file and copies it into a Calamus CFN font file.

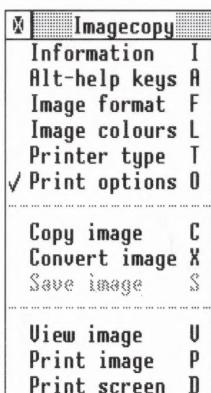


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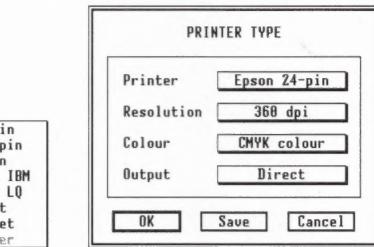
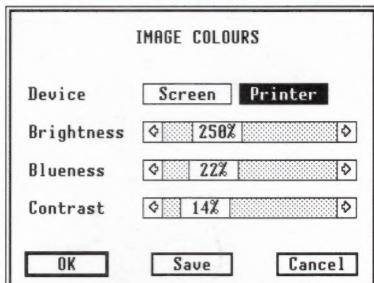
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The latest version of Imagecopy allows you to print colour images on a dot-matrix or inkjet printer. Colour images can be printed in any of the standard printer resolutions, and colour quality can be adjusted to increase the brightness, blueness and contrast of an image. If you don't have a colour printer, Imagecopy can print colour separations which may be superimposed to produce a full-colour image. In addition, the colour facilities can be used to improve the print quality of colour images which are printed in black and white.

Resolution options have been extended to offer an extra resolution for 9-pin printers (72 dpi), and another extra resolution for 24-pin and LQ bubblejet printers (60 dpi). The Laserjet slot contains two extra resolutions (200 and 600 dpi). These should work with the new HP Laserjet 4 printer.

The Colour menu offers five choices: Monochrome, CMY colour, CMYK colour, CMY separation, and CMYK separation. The colour separation modes can be used to print full colour images from a monochrome printer.

Because images normally print darker than they are displayed on screen, you can use the Imagecopy brightness setting to compensate for this. If your printer information specifies a 'gamma correction value' you can convert this to a brightness setting. The brightness setting can also be used to improve the way that colour images are printed or displayed on a monochrome printer or monitor.

A Blueness setting is available to compensate for the fact that colour printers sometimes print blue with a purple tinge. The Contrast setting increases the contrast between light and dark colours.